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Kylie Wha Kyung Wager

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In Common Law We Trust: How Hawai'i's Public Trust Doctrine Can Support Atmospheric Trust Litigation to Address Climate Change

*Kylie Wha Kyung Wager**

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* J.D. Candidate, December 2013, University of Hawai'i at Mānoa William S. Richardson School of Law. Mahalo to Denise Antolini, Maxine Burkett, and D. Kapua'ala Sproat for their guidance and mana'o. Special thanks to Elizabeth Brown, Douglas Codiga, Gary Gill, Victoria Loorz, Julia Olson, Steven Oppenheimer, Joshua Scott, Richard Wallsgrove, and of course, Mary Wood.

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I. Introduction

[T]here will be judges who recognize this epochal moment in the course of human civilization and exert their common law authority to protect the globe's atmosphere—and the billions of people dependent on it for all time to come.¹

-Mary Christina Wood

Like many other teenagers growing up in Hawai'i, seventeen-year-old Joshua Hamilton Scott enjoys the beach, the ocean, and nature.² But he worries what the world will be like in 2050.³ He worries about climate change.⁴ Already, he has noticed that the coral reefs are dying and that the beaches are disappearing, especially during storms and high tides.⁵ Joshua fears that in 2050, when he is fifty-seven years old, most of the fish will be gone and tornadoes, hurricanes, floods, and drought will threaten his livelihood.⁶ He believes the government has failed to take action on climate change and to prioritize kids' futures.⁷ So Joshua has petitioned the State of

1. Mary Christina Wood, *Atmospheric Trust Litigation*, in *CLIMATE CHANGE: A READER* 1018, 1040 (William H. Rodgers Jr. et al. eds., 2011) [hereinafter ATL].

2. Petition of Joshua Scott & Kids vs. Global Warming, Haw. Dep't of Health (May 4, 2011) [hereinafter Scott ATL Petition].

3. *Id.* at 4.

4. *Id.*

5. *Id.*

6. *Id.*

7. *Id.*

Hawai'i Department of Health (DOH) to adopt rules that better protect the atmosphere.⁸

Joshua is one of many young people who are stepping forward as plaintiffs in a nationwide climate change litigation effort known as atmospheric trust litigation (ATL).⁹ In May 2011, as part of the Kids vs Global Warming's¹⁰ iMatter Campaign,¹¹ Joshua and youth plaintiffs from all fifty states filed lawsuits or petitions for administrative rulemaking seeking agency action to reduce atmospheric carbon dioxide (CO₂) concentrations to 350 parts-per-million (ppm) by 2100, the amount recommended by climate scientists to restore ecological balance and protect future generations from the dangerous effects of climate change.¹² The ATL legal theory maintains that the state and federal governments hold the atmosphere in public trust and must protect the resource for present and future generations.¹³ Represented by a national nonprofit organization, Our Children's Trust,¹⁴ the youth plaintiffs also have filed ATL claims in federal and state courts.¹⁵ So far, the petitions and lawsuits have gained limited traction,¹⁶ but these types of environmental campaigns take years to unfold before one can evaluate their overall success.

8. *Id.*

9. Discussed *infra* Section III.B.

10. Kids vs Global Warming—a nonprofit organization with more than 10,000 youth members from across the United States—is “committed to creating opportunities for youth to learn about the science and solutions of human-made climate change, and then to take action that will reduce dependence on fossil fuels and influence governments throughout the world to make good decisions now that impact the future of youth generations to come.” Amended Complaint at 13, Alec L. v. Lisa P. Jackson, 863 F. Supp. 2d 11 (2012) (No. C11-02203 DMR). Founder Alec Loorz and his mother, Executive Director Victoria Loorz, started Kids vs Global Warming in 2009 when Alec was thirteen years old. Alec Loorz, iMATTER YOUTH MOVEMENT, <http://www.imatteryouth.org/#!/alec-loorz/c8c1> (last visited Mar. 24, 2013).

11. The iMatter Campaign is a Kids vs Global Warming initiative. The campaign involves lawsuits, lobbying, and raising youth leaders and public awareness. *About*, iMATTER YOUTH MOVEMENT, <http://www.imatteryouth.org/#!/about/c14qb> (last visited Mar. 24, 2013).

12. Scott ATL Petition, *supra* note 2, at 4.

13. Discussed *infra* Section III.B.

14. Our Children's Trust is an Oregon nonprofit organization whose purpose is “to protect earth's natural systems for current and future generations.” *About Us*, OUR CHILDREN'S TRUST, <http://ourchildrenstrust.org/about> (last visited Mar. 24, 2013).

15. See *Legal Action*, OUR CHILDREN'S TRUST, <http://ourchildrenstrust.org/Legal> (last visited Mar. 4, 2013) (listing current and past claims).

16. Discussed *infra* Section III.B.2.

Although the DOH denied Joshua's petition for rulemaking,¹⁷ Hawai'i's progressive public trust doctrine may make the jurisdiction ideal for a follow-up ATL claim in state court.¹⁸ This paper examines whether Hawai'i's public trust doctrine can support atmospheric trust litigation to mitigate climate change. Part II provides background on climate change science, policy, and litigation. Part III describes the public trust doctrine's origins and modern applications in the United States, Hawai'i, and throughout the world, as well as the underlying legal theory and status of ATL throughout the nation and in Hawai'i. Part IV examines whether the atmosphere is a public trust resource in Hawai'i based on its four legal bases, assesses how and whether a Hawai'i court would conclude that the state has breached its atmospheric public trust duties, and examines the practical implications of a court granting declaratory and injunctive relief. Moving through this analysis draws mixed results for potential ATL plaintiffs in Hawai'i. The Hawai'i public trust doctrine's progressive and evolutionary nature may likely support a conclusion that the atmosphere is a public trust resource, but legal standards regarding what would constitute a breach of trust and the practical implications of granting relief could complicate a court's ultimate ruling. This paper examines the case for ATL in Hawai'i.

II. Background: Climate Change Science, Policy and Litigation

The evolving arena of climate change science, policy, and litigation sets the stage for atmospheric trust litigation.

A. Climate Change Science and Impacts

Since the late 1800s, scientists have been observing and recording evidence of climate change.¹⁹ In 1897, Svante Arrhenius published the first report calculating the impact of CO₂ on the atmosphere.²⁰ In 1957, Charles David Keeling began collecting and recording atmospheric samples from the

17. Letter from Gary Gill, Deputy Director, State of Haw. Dep't of Health, to Alec Loorz & Victoria Loorz, Kids vs. Global Warming (June 8, 2011) [Gill Response Letter].

18. Telephone Interview with Victoria Loorz, Exec. Director, Kids vs. Global Warming (Feb. 28, 2013).

19. See, e.g., Anna Moritz, *Scientific Consensus on Climate Change*, in CLIMATE CHANGE: A READER 16-25 (William H. Rodgers Jr. et al. eds., 2011) (tracing significant developments in climate change science from the late 1800s through the present).

20. Svante Arrhenius, *On the Influence of Carbonic Acid in the Air upon the Temperature of the Ground*, 41 PHI. MAG. & J. OF SCI. 237 (1897).

high and barren slopes of Mauna Loa on the Island of Hawai'i.²¹ In 1978, John Mercer published the first report warning the world about the potential impacts of global warming on the West Antarctic Ice Sheet, and possible rise in sea level.²² After more than a century of scientific study and development, "[c]limate change, once considered an issue for a distant future, has moved firmly into the present."²³ Global climate change indicators translate into uniquely local impacts and concerns.

1. Global Climate Change

Although new scientific data and information on climate change frequently emerges,²⁴ periodic assessment reports from the Intergovernmental Panel on Climate Change (IPCC)²⁵ form the bedrock of modern climate change science. In 2007, the IPCC released its fourth and most recent complete assessment report (AR4).²⁶ The IPCC's fifth assessment report (AR5) is still underway, but the physical science portion

21. ESRL Global Monitoring Division – Carbon Cycle Group, U.S. DEP'T OF COMMERCE NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION, <http://www.esrl.noaa.gov/gmd/ccgg/about/co2measurements.html> (last visited Mar. 13, 2013); Justin Gillis, *A Scientist, His Work and a Climate Reckoning*, N.Y. TIMES, Dec. 21, 2010, <http://www.nytimes.com/2010/12/22/science/earth/22carbon.html?pagewanted=all>.

22. John Mercer, *West Antarctic Ice Sheet and CO₂ Greenhouse Effect: Threat of Disaster*, 217 NATURE 321 (1978).

23. NATIONAL CLIMATE ASSESSMENT AND DEVELOPMENT ADVISORY COMMITTEE [NCADAC], DRAFT THIRD NATIONAL CLIMATE ASSESSMENT I (2013) [hereinafter DRAFT NCA REPORT], available at <http://ncadac.globalchange.gov/download/NCAJan11-2013-public-reviewdraft-fulldraft.pdf>.

24. Daily internet blogs such as Climate Progress provide daily updates on all things climate, including science, policy, politics, and media coverage. *Climate Progress*, THINK PROGRESS, <http://thinkprogress.org/climate/issue/> (last visited Mar. 8, 2013).

25. The Intergovernmental Panel on Climate Change (IPCC), "the leading international body for the assessment of climate change," was established in 1988 under the auspices of the United Nations. *Organization*, INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, <http://www.ipcc.ch/organization/organization.shtml#UUlBRmyBDg> (last visited March 24, 2013). The IPCC "reviews and assesses the most recent scientific, technical and socio-economic information produced worldwide relevant to understanding climate change." *Id.* Thousands of volunteer scientists from throughout the world contribute to the IPCC, which is open to all U.N. and World Meteorological Organization (WMO) members. *Id.* The IPCC Fifth Assessment Report is forthcoming in 2013 and 2014. *Preparations for AR5 enter final stage*, INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, <http://www.ipcc.ch/index.htm#UUvFRmyBDg> (last visited Mar. 24, 2013).

26. INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, FOURTH ASSESSMENT REPORT (2007).

of the report was completed in 2013.²⁷ Observed climate change indicators included warming of the climate system, sea-level rise, decreases in snow and ice, changes in precipitation, and extreme weather events.²⁸ Climate change has and continues to impact natural systems, ecosystems, hydrological systems, marine and freshwater biological systems, agriculture and forestry, human health, and human activities.²⁹ Sea-level rise, in particular, has contributed to the loss of coastal wetlands and increased coastal flooding.³⁰

Striking among the IPCC's findings is the degree of certainty that humans are responsible for causing climate change: "Human influence on the climate system is clear."³¹ According to the IPCC, "[i]t is *extremely likely* [i.e. 95% to 100% certain] that human influence has been the dominant cause of the observed warming since the mid-20th century."³² From preindustrial times to 2005, the global concentration of CO₂ in the atmosphere increased from 280 to 379 ppm.³³ Today, the figure exceeds 390 ppm,³⁴ and in May 2013, the concentration peaked over 400 ppm.³⁵ As of December 2012, CO₂ emissions were "on track to meet or exceed the most extreme emissions scenarios outlined by the [IPCC] in its 2007 report."³⁶ In addition to CO₂, human activities produce three additional long-lived greenhouse gases (GHGs): methane (CH₄), nitrous oxide (N₂O), and halocarbons.³⁷ Between 1970 and 2004, anthropogenic GHG emissions grew by 70%—the greatest recorded climb—largely due to energy production,

27. *Fifth Assessment Report* (AR5), IPCC, <http://www.ipcc.ch/> (last visited Oct. 18, 2013).

28. INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2007: SYNTHESIS REPORT 30 (Abdelkader Allali et al. eds., 2007) [hereinafter AR4 SYNTHESIS REPORT], *available at* http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr.pdf.

29. *Id.* at 31-33.

30. *Id.* at 33.

31. INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2013: THE PHYSICAL SCIENCE BASIS, SUMMARY FOR POLICYMAKERS 10 (2013) [hereinafter AR5 SCIENCE SPM], *available at* http://www.climatechange2013.org/images/uploads/WGIAR5-SPM_Approved27Sep2013.pdf.

32. *Id.* at 12. The report defines *extremely likely* as 95% to 100%. *Id.* at 2.

33. IPCC, AR4 SYNTHESIS REPORT, *supra* note 28, at 37.

34. NCADAC, DRAFT NCA REPORT, *supra* note 23, at 1072.

35. *Trends in Carbon Dioxide*, U.S. DEP'T OF COMMERCE NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION <http://www.esrl.noaa.gov/gmd/ccgg/trends/weekly.html> (last visited Oct. 18, 2013).

36. Lauren Morello, *Global CO₂ Emissions from Fossil-Fuel Burning Rise into High-Risk Zone*, SCIENTIFIC AMERICAN, Dec. 3, 2012, <http://www.scientificamerican.com/article.cfm?id=global-co2-emissions-from>.

37. IPCC, AR4 SYNTHESIS REPORT, *supra* note 28, at 37.

transportation, and industry.³⁸ GHG concentrations in the atmosphere have “increased to levels unprecedented in at least the last 800,000 years.”³⁹ And, global anthropogenic GHG levels continue to rise.⁴⁰

In 2013, the U.S. National Climate Assessment and Development Advisory Committee⁴¹ released the third National Climate Assessment (NCA), in draft form.⁴² The assessment contains five major updates since the second NCA in 2009⁴³: (1) an increased likelihood that the earth is warming and primarily due to human activities;⁴⁴ (2) increased heavy precipitation and extreme heat events and the risks of such extreme events will grow;⁴⁵ (3) sharp declines in summer Arctic sea ice, with 2012 marking a new low;⁴⁶ (4) an increased likelihood that human activities have caused recent, unusual upswings in sea-level rise;⁴⁷ and (5) enhanced climate scenarios that have facilitated studies on the impacts of deliberate GHG reductions.⁴⁸ Thus, climate scientists continue to point to the conclusion that lessening climate change impacts will require the Earth’s inhabitants to curb and lower GHG emissions.

In 2007, the Union of Concerned Scientists (UCS) reported, “an increase in global average temperature of two to three degrees Celsius above preindustrial levels (i.e., those that existed prior to 1860) poses severe risks to natural systems and human health and well-being.”⁴⁹ The UCS advised that the concentration of GHGs in the atmosphere must stabilize at levels at or below 450 ppm to meet the limit on temperature rise.⁵⁰ The UCS

38. *Id.* at 36.

39. IPCC, AR5 SCIENCE SPM, *supra* note 31, at 7.

40. See NOAA Annual Greenhouse Gas Index (AGGI), NOAA/ESRL GLOBAL MONITORING DIVISION, <http://www.esrl.noaa.gov/gmd/aggi/> (last visited Mar. 21, 2013) (listing GHG radiative forcing measurements from 1979 to 2011).

41. The NOAA-supported NCADAC was established under the U.S. Department of Commerce in December 2010 to oversee the activities of the third National Climate Assessment. NCADAC, DRAFT NCA REPORT, *supra* note 23, at 1.

42. *Id.*

43. *Id.*

44. *Id.* at 27.

45. *Id.*

46. *Id.*

47. *Id.*

48. *Id.*

49. AMY L. LUERS ET AL., UNION OF CONCERNED SCIENTISTS, HOW TO AVOID DANGEROUS CLIMATE CHANGE, A TARGET FOR U.S. EMISSIONS REDUCTIONS 1 (2007), available at http://www.ucsusa.org/assets/documents/global_warming/emissions-target-report.pdf.

50. *Id.*

further advised that “the industrialized nations will have to reduce their emissions 70% to 80% below 2000 levels by 2050,”⁵¹ assuming that emissions peaked in 2010 and those from developing nations peak by 2025.⁵² The UCS’s recommendation—450 ppm—has been the baseline goal for international climate treaties.⁵³

Since the UCS made its recommendation, other scientists have asserted that lessening and avoiding dangerous climate change impacts will require even greater GHG reductions. Prominent climate scientist James Hansen, lead author of the report building the scientific basis for ATL claims and petitions,⁵⁴ maintains that restoring the earth’s balance will require a reduction in atmospheric CO₂ concentrations to 350 ppm by the end of the century.⁵⁵ To achieve the 350 ppm target, Hansen advised that the world collectively must reduce CO₂ emissions by 6% each year until 2050, “along with massive reforestation.”⁵⁶ According to Hansen, if we began reducing emissions in 2005, the necessary reductions would have been 3% annually; if we wait until 2020, the necessary reductions will be 15% annually.⁵⁷ He warns that the current level of GHGs in the atmosphere “is already too high to maintain the climate to which humanity, wildlife, and the rest of the biosphere have adapted.”⁵⁸ The planet is at risk of reaching dangerous “‘tipping points,’ the concept that climate can reach a point where, without additional forcing, rapid changes proceed practically out of control.”⁵⁹ Possible tipping points include swift melting of Arctic sea ice and the West Antarctic Ice Sheet⁶⁰ and major releases of methane from melting permafrost.⁶¹ Hansen says that if we fail to meet the 350 ppm prescription,

51. *Id.*

52. *Id.* at 1-2.

53. Discussed *infra* Section II.B.1.

54. James Hansen et al., *Scientific Case for Avoiding Dangerous Climate Change to Protect Young People and Nature* (forthcoming 2013) [hereinafter *Scientific Case for Young People*].

55. Johan Rockström et al., *A Safe Operating Space for Humanity*, 461 NATURE 472, 473; JAMES HANSEN, STORMS OF MY GRANDCHILDREN 166 (2009); James E. Hansen et al., *Target Atmospheric CO₂: Where Should Humanity Aim?* 2 OPEN ATMOS. SCI. 217, 217-38 (2008) [hereinafter *Where Should Humanity Aim?*].

56. Hansen et al., *Scientific Case for Young People*, *supra* note 54, at 1.

57. *Id.* at 2.

58. Hansen et al., *Where Should Humanity Aim?*, *supra* note 55, at 228.

59. *Id.* at 217-38.

60. *Id.* at 225.

61. Rockström et al., *supra* note 55, at 473; HANSEN, STORMS OF MY GRANDCHILDREN, *supra* note 55, at 166; Hansen et al., *Where Should Humanity Aim?*, *supra* note 55, at 217-38.

the “costs of climate change . . . will be borne by the public, especially by young people and future generations.”⁶²

2. Climate Change in the United States

Climate change translates into wide-ranging impacts throughout the United States. According to the 2013 NCA report, summers are longer and hotter with longer periods of extreme heat than ever before, and winters generally are shorter and warmer.⁶³ Since the 1980s, frost-free seasons have increased nationally⁶⁴ and hurricanes in the North Atlantic have become stronger.⁶⁵ Over the last thirty to fifty years, heavy downpours have increased,⁶⁶ but the dry spells in between them have lasted longer.⁶⁷ During storms and high tide, street flooding occurs more regularly.⁶⁸ In the West, wildfires begin earlier in the year, extend later into the fall, and cause more evacuations and greater damage.⁶⁹ The observed rate of ocean acidification is now fifty times faster than any known historical rate of change.⁷⁰ By 2100, sea level is projected to rise another one to four feet.⁷¹ Land, lake, and sea ice continues to melt away.⁷² In Alaska, thirty Native villages are in need or in the process of relocating their homes and infrastructure due to increased thawing of permafrost, which causes erosion and flooding and is exacerbated by sea-level rise and increasingly severe storms.⁷³ Because of the lag time between GHG emissions and climate change impacts, past emissions will dictate the degree and extent of climate change experienced for the next twenty to thirty years.⁷⁴ But taking action today can lay a foundation for a more hopeful second half of the century.⁷⁵

62. Hansen et al., *Scientific Case for Young People*, *supra* note 54, at 2.

63. NCADAC, DRAFT NCA REPORT, *supra* note 23, at 1.

64. *Id.* at 39-41.

65. *Id.* at 59-62.

66. *Id.* at 47-51.

67. *Id.* at 1.

68. *Id.*

69. *Id.*

70. *Id.* at 69.

71. *Id.* at 59-62.

72. *Id.*

73. *Id.* at 45.

74. *Id.* at 36.

75. *Id.*

3. Climate Change in Hawai'i

Evidence of climate change in Hawai'i and the Pacific Islands raises unique and serious concerns.⁷⁶ Indicators of climate change include increased CO₂ concentrations and air temperatures, particularly at high elevations, as well as increased sea-surface temperatures and sea levels.⁷⁷ Droughts are growing more severe, and extreme rainfall events less frequent,⁷⁸ but more intense.⁷⁹ Especially in recent decades, average stream discharge and stream base flow have been trending downward, with high variability.⁸⁰ Since the preindustrial area, ocean acidity has increased by about 26%, and by 2100, is estimated to increase another 37% to 50%.⁸¹ In fact, the ocean has absorbed about a third of human-caused CO₂.⁸² In the past decade, at least three mass coral bleaching episodes occurred in the Northwestern Hawaiian Islands.⁸³ These indicators impact and will continue to impact Hawai'i.

According to the 2013 Pacific Islands Regional Climate Assessment (PIRCA) report, "climatic changes are affecting every aspect of life."⁸⁴ Climate change threatens Hawai'i's traditional and indigenous lifestyles, human health, freshwater supplies, food security, freshwater and marine ecosystems, major infrastructure, and economy.⁸⁵ For example, even with a substantial reduction in global CO₂ emissions, reefs—which provide an estimated \$385 million annually in goods and services to Hawai'i—could lose up to 40% of reef-associated fish.⁸⁶ Furthermore, in Hawai'i and the Pacific Islands:

Almost without exception, international airports are sited on or within one or two miles of the coast, and the main (and often only) road network runs along the coastline. Because Pacific

76. See PACIFIC ISLANDS REGIONAL CLIMATE ASSESSMENT (PIRCA), CLIMATE CHANGE AND PACIFIC ISLANDS: INDICATORS AND IMPACTS (Victoria W. Keener et al. eds., 2012) [hereinafter PIRCA REPORT], available at http://www.cakex.org/sites/default/files/documents/NCA-PIRCA-FINAL-int-print-1.13-web.form_.pdf.

77. *Id.* at 22-25.

78. *Id.*

79. CHARLES FLETCHER, HAWAII'S CHANGING CLIMATE, BRIEFING SHEET (2010).

80. NCADAC, DRAFT NCA REPORT, *supra* note 23, at 807.

81. *Id.* at 805.

82. *Id.*

83. *Id.*

84. PIRCA REPORT, *supra* note 76, at ix.

85. *Id.* at 26-28.

86. NCADAC, DRAFT NCA REPORT, *supra* note 23, at 806.

Islands are almost entirely dependent on imported food, fuel, and material, the vulnerability of ports and airports . . . is of great concern.⁸⁷

In addition, sea-level rise will accelerate and expand coastal erosion, which already threatens Hawai'i's beaches and coastal homes and infrastructure.⁸⁸ With continued climate change, these impacts "are expected to become more widespread and more severe."⁸⁹

B. Climate Change Law and Policy

Although climate change science is sufficiently developed to warrant worldwide government action, the patchwork of government laws and policies addressing climate change are inadequate to mitigate climate change.

1. U.N. Climate Change Policy

For the past two-and-a-half decades, policymakers have been attempting to address climate change at the international level through treaty law.⁹⁰ On May 9, 1992, the United Nations adopted the United Nations Framework Convention on Climate Change (UNFCCC),⁹¹ which went into force on March 21, 1994.⁹² The UNFCCC established an international objective to stabilize GHG concentrations "at a level that would prevent dangerous anthropogenic interference with the climate system."⁹³ The UNFCCC has 195 parties—194 countries, including the United States, and the European Union.⁹⁴

On December 11, 1997, the United Nations adopted the Kyoto Protocol, which went into force on February 16, 2005,⁹⁵ to formally commit

87. PIRCA REPORT, *supra* note 76, at 27 (citations omitted).

88. FLETCHER, *supra* note 79.

89. PIRCA REPORT, *supra* note 76, at ix.

90. See UNITED NATIONS FRAMEWORK ON CLIMATE CHANGE, <http://unfccc.int/2860.php> (last visited Mar. 4, 2013) (listing international negotiations on climate change).

91. *Essential Background*, UNITED NATIONS FRAMEWORK ON CLIMATE CHANGE, <http://unfccc.int/essentialbackground/items/6031.php> (last visited Mar. 4, 2013).

92. *Id.*

93. UNITED NATIONS FRAMEWORK ON CLIMATE CHANGE, art. 2 (1992).

94. *Essential Background*, UNFCCC, *supra* note 91.

95. *Kyoto Protocol*, UNITED NATIONS FRAMEWORK ON CLIMATE CHANGE http://unfccc.int/kyoto_protocol/items/2830.php (last visited Mar. 4, 2013).

parties to implementing the UNFCCC.⁹⁶ To date, 192 parties have ratified the Kyoto Protocol, not including the United States.⁹⁷ The Kyoto Protocol's first commitment period, which required developed country parties to reduce GHG emissions reductions to 5% below 1990 levels, began in 2008 and ended in 2012.⁹⁸ Other discussions and agreements under the UNFCCC have included the 2007 Bali Road Map⁹⁹ and the 2010 Cancun Agreements.¹⁰⁰

During the 2011 Durban negotiations, all industrialized countries and at least forty-eight developing countries expressed their intentions to pursue emissions reductions, but the total pledges amounted to only 60% of the reductions necessary to limit GHG concentrations to 450 ppm and temperature increases to 2 degrees Celsius above pre-industrial levels.¹⁰¹ On December 8, 2012, the United Nations adopted the Doha Amendment to the Kyoto Protocol, which requires GHG emissions reductions to 18% below 1990 levels from 2013 to 2020.¹⁰² But, without participation by major emitters like the United States, which produces 28% of CO₂ in the atmosphere¹⁰³ and the most in the world per capita (four times more than China and fourteen times more than India),¹⁰⁴ these efforts ultimately could fail.¹⁰⁵

96. *Id.*

97. *Parties to the Kyoto Protocol*, UNFCCC, <http://maindb.unfccc.int/public/country.lpl?group=kyoto> (last visited Mar. 30, 2013).

98. *Kyoto Protocol*, UNFCCC, *supra* note 95.

99. *Bali Road Map*, UNITED NATIONS FRAMEWORK ON CLIMATE CHANGE, <http://unfccc.int/keydocuments/baliroadmap/items/6447.php> (last visited Mar. 4, 2013).

100. *Cancun Agreements*, UNITED NATIONS FRAMEWORK ON CLIMATE CHANGE, <http://unfccc.int/meetings/cancunnov2010/items/6005.php> (last visited Mar. 4, 2013).

101. *Essential Background*, UNFCCC, *supra* note 91.

102. *Kyoto Protocol*, UNFCCC, *supra* note 95.

103. *Fossil-Fuel CO2 Emissions, Carbon Dioxide and Information Analysis Center*, U.S. DEPT OF ENERGY & OAK RIDGE NATURAL LABORATORY, http://cdiac.ornl.gov/trends/emis/meth_reg.html (last visited Apr. 23, 2013).

104. *Each Country's Share of CO2 Emissions*, UNION OF CONCERNED SCIENTISTS, http://www.ucsusa.org/global_warming/science_and_impacts/science/each-countrys-share-of-co2.html (last visited Apr. 23, 2013).

105. Mary Christina Wood, *Law and Climate Change: Government's Atmospheric Trust Responsibility*, 38 E.L.R. 10652, 10658 (2008) [hereinafter *Law and Climate Change*].

2. Lack of a U.S. National Policy

In addition to refusing to sign any binding agreements to implement the UNFCCC,¹⁰⁶ the United States also has failed to pass legislation to reduce GHG emissions at the national level.¹⁰⁷ In 2009, the American Clean Energy and Security Act, which would have established a GHG emissions trading plan, passed in the U.S. House of Representatives, but died in the Senate.¹⁰⁸ In 2012, the number of climate-specific bills introduced in Congress dropped to half the number introduced during the preceding session.¹⁰⁹ In addition, fifty-five bills were introduced to block or hinder climate action, “[r]eflecting an anti-regulatory mood on Capitol Hill.”¹¹⁰ Political analysts have predicted that Congress likely will not pass comprehensive climate change legislation limiting GHG emissions until at least 2017, and only if the Democratic Party regains a majority of seats in the Senate.¹¹¹ In addition, it is uncertain whether such legislation would conform to prescribed scientific recommendations for GHG reductions.

3. Hawai‘i Climate Change Law and Clean Energy Law

Although Hawai‘i ranks forty-third among the United States and the District of Columbia for GHG emissions,¹¹² each jurisdiction should reduce carbon proportionately by the same amount, or else “it will leave an orphan share that will sink all other planetary efforts. The carbon pie will not shrink by the amount it needs to.”¹¹³ Furthermore, Hawai‘i’s carbon footprint is not as small as it appears because data for the state does not take into account

106. On July 25, 1997, the U.S. Senate passed Resolution 98, also known as the Byrd-Hagel Resolution, stating that the United States should not sign the Kyoto Protocol unless developing nations are held to the same standards and the United States bears no substantial economic costs. S. Res. 98, 105th Cong. (1997).

107. Brief for Law Professors as Amici Curiae Supporting Plaintiffs, *Alec L. v. Lisa Jackson*, No. 3:11-cv-02203 EMC (filed N.D. Cal., Dec. 7, 2011), at 7.

108. H.R. 2454, 111th Cong. (2009).

109. *Legislation in the 112th Congress Related to Global Climate Change*, CENTER FOR CLIMATE AND ENERGY SOLUTIONS, <http://www.c2es.org/federal/congress/112> (last visited Mar. 4, 2013).

110. *Id.*

111. Theda Skoepol, Victor S. Thomas Prof. of Gov’t & Sociology, Harvard Univ., Presentation at Univ. of Haw. Sponsored Event, Naming the Problem: What it Will Take to Counter Extremism and Engage Americans in the Fight Against Global Warming (Mar. 12, 2013).

112. U.S. States – Rankings – U.S. Emissions, U.S. ENERGY INFORMATION ADMINISTRATION, <http://www.eia.gov/state/rankings/#/series/226> (last visited Apr. 23, 2013).

113. Wood, *Law and Climate Change*, *supra* note 105, at 10658.

air or marine transportation, which in 2007 comprised 23% of Hawai'i's GHG emissions.¹¹⁴

Like several other states,¹¹⁵ Hawai'i has taken some steps to address climate change.¹¹⁶ In 2007, Hawai'i became the second state in the nation to enact major climate change legislation to reduce GHG emissions.¹¹⁷ Finding that "climate change poses a serious threat to the economic well-being, public health, natural resources, and the environment in Hawaii,"¹¹⁸ the legislature passed Act 234,¹¹⁹ which requires the state to reduce GHG emissions to amounts at or below 1990 levels by 2020.¹²⁰ Act 234 further required the DOH to complete an updated GHG inventory by the end of December 31, 2008,¹²¹ and established an emissions reduction task force.¹²² To implement Act 234, the DOH director must adopt rules that: (1) establish emission limits for sources and categories of sources, (2) establish emission reduction measures, (3) require reporting and verification of statewide emissions, and (4) monitor and enforce compliance.¹²³ The rules, due for promulgation in December 31, 2011,¹²⁴ currently remain in draft form for public review.¹²⁵ The draft rules require stationary sources to reduce their GHG emissions to at least 25% below 2010 emissions, but exclude aviation, municipal solid waste combustion, and bio-genic (e.g., biofuel) sources from complying with the rules.¹²⁶ The draft rules further require regulated sources to establish GHG emissions reduction plans and pay fees if they fail to meet

114. ICF INTERNATIONAL, HAWAII GREENHOUSE GAS INVENTORY: 1990 AND 2007 4 Table 2 (2008).

115. See *Greenhouse Gas Emissions Targets*, CENTER FOR CLIMATE AND ENERGY SOLUTIONS, <http://www.c2es.org/us-states-regions/policy-maps/emissions-targets> (last visited Mar. 4, 2013) (listing other states with GHG emissions reductions targets).

116. See Kylie Wager, Center for Island Climate Adaptation & Policy, *Climate Law and Policy in Hawai'i*, Briefing Sheet, 2012 (2012) (summarizing Hawai'i climate change law and policy).

117. 2007 Haw. Sess. Laws, Act 234 (Haw. 2007).

118. *Id.* § 1.

119. *Id.*

120. *Id.* § 2 (codified at HAW. REV. STAT. § 342B-71).

121. *Id.* § 3.

122. *Id.* § 4.

123. HAW. REV. STAT. § 342B-72(a).

124. 2007 Haw. Sess. Laws, Act 234, § 8 (Haw. 2007) (codified at HAW. REV. STAT. § 342B-72).

125. *Clean Air Branch*, HAWAII STATE DEPARTMENT OF HEALTH, <http://hawaii.gov/health/environmental/air/cab/index.html> (last visited Mar. 4, 2013).

126. HAW. ADMIN. R. ch 11-60.1 (proposed Feb. 1, 2012).

the required 25% reduction.¹²⁷ The draft rules grant the DOH discretion in enforcing the rules.¹²⁸

In 2009, the Hawai'i Legislature enacted Act 155,¹²⁹ which, in accordance with the Hawai'i Clean Energy Initiative (HCEI), set a statewide goal to achieve a 70% clean energy economy by 2030.¹³⁰ HCEI, a partnership created in 2008 between the State of Hawai'i and the U.S. Department of Energy,¹³¹ strives for 40% renewable energy and 30% energy efficiency to meet the statewide goal.¹³² Act 155 increased Hawai'i's renewable energy portfolio standard (RPS) from 25% by 2020 to 40% by 2030¹³³ and charged the State of Hawai'i Public Utilities Commission (PUC) with establishing energy efficiency portfolio standards (EEPS) to achieve 4,300 gigawatt hours (or 30%) of electricity use reductions by 2030.¹³⁴ In addition, the PUC must evaluate the RPS every five years, starting in 2013, "and may revise the standards based on the best information available at the time to determine if the standards remain effective and achievable."¹³⁵

Because climate change is a global problem and will inevitably continue to impact Hawai'i despite even the best mitigation plan,¹³⁶ the state has turned its attention toward adaptation—that is, increasing resiliency and reducing vulnerability to climate change impacts.¹³⁷ In 2012, the Hawai'i Legislature passed Act 286, which adds climate change adaptation priority guidelines to the Hawai'i State Planning Act.¹³⁸ Governor Abercrombie also acknowledged the importance of adaptation in Hawai'i, writing to the PIRCA team, "[t]he time for a long-term statewide plan for the

127. *Id.*

128. *Id.*

129. 2009 Haw. Sess. Laws, Act 155 (Haw. 2009).

130. *Id.* § 1.

131. *About the Hawaii Clean Energy Initiative*, HCEI, <http://www.hawaiicleanenergyinitiative.org/about/>; see Douglas A. Codiga, *Hawaii Clean Energy Law and Policy*, 13 HAW. B.J. 4 (2009).

132. *Home*, HCEI, <http://www.hawaiicleanenergyinitiative.org/> (last visited Mar. 4, 2013).

133. 2009 Haw. Sess. Laws, 25th Leg., Act 155, § 3(a) (codified at HAW. REV. STAT. § 269-92(a)).

134. *Id.* § 11 (codified at HAW. REV. STAT. § 269-96).

135. *Id.* § 3 (codified at HAW. REV. STAT. § 269-95).

136. PIRCA REPORT, *supra* note 76, at ix.

137. See Wager, *supra* note 116 (summarizing Hawai'i climate change law and policy).

138. 2012 Haw. Sess. Laws, Act 286 (to be codified at HAW. REV. STAT. ch. 226, pt. III).

effects of our changing climate is now.”¹³⁹ Although no comprehensive climate change adaptation plan exists for Hawai’i, some agencies and counties have begun considering and accounting for climate change impacts within the scope of their governmental responsibilities.¹⁴⁰ Hawai’i, then, has begun to address climate change both by taking steps to reduce GHG emissions and by preparing the state for the climate change impacts.

C. Climate Change Litigation in the United States: A Brief Overview

Climate change litigation has emerged as a potential vehicle for accelerating government action in the United States and elsewhere. According to a 2012 empirical study of all 201 climate change litigation matters filed in the United States through 2010,¹⁴¹ most involved non-governmental environmental organization plaintiffs suing the state or federal government.¹⁴² Professor Michael Gerrard and J. Cullen Howe have divided climate change litigation in the United States into four major categories of claims: statutory, common law, public international law, climate protestors and scientists, and adaptation.¹⁴³ Statutory claims involve three types of actions: forcing the government to act, stopping government action, and regulating private conduct.¹⁴⁴ Climate change plaintiffs have sought relief under a range of federal statutes, including the Clean Air Act, the Endangered Species Act, the Clean Water Act, the National Environmental Policy Act, and the Freedom of Information Act.¹⁴⁵ Aside from *Massachusetts v. Environmental Protection Agency*,¹⁴⁶ discussed *infra*, no court has “overtly nudged an agency toward a cascade of regulation, much less commanded it.”¹⁴⁷ But “climate change litigation is still in its early

139. Letter from Gov. Neil Abercrombie, State of Haw., to Pacific Islands Regional Assessment Team (Mar. 7, 2012).

140. See Wager, *supra* note 116 (summarizing Hawai’i climate change adaptation law and policy).

141. David Markell & J.B. Ruhl, *An Empirical Assessment of Climate Change In The Courts: A New Jurisprudence Or Business As Usual?*, 64 FLA. L. REV. 15, 15 (2012).

142. *Id.* at 60.

143. Michael B. Gerrard, J. Cullen Howe & L. Margaret Barry, Arnold & Porter LLP, Climate Change Litigation in the U.S. (version as of Oct. 3, 2013), <http://www.climatecasechart.com>.

144. *Id.*

145. *Id.*

146. *Massachusetts v. Evtl. Prot. Agency*, 549 U.S. 497 (2007).

147. Markell & Ruhl, *supra* note 141, at 81.

stages . . . and it is quite possible that future case law will include exceptional approaches or outcomes.”¹⁴⁸

Massachusetts v. Environmental Protection Agency was the blockbuster climate change lawsuit based on a statutory claim. In 2007, the U.S. Supreme Court held that the Clean Air Act authorized the Environmental Protection Agency (EPA) to regulate GHG emissions from new motor vehicles, despite EPA’s contention under the George W. Bush administration that Congress did not intend to regulate GHG emissions in the Act.¹⁴⁹ Justice Stevens, writing for the five-to-four majority, further advised, “EPA can avoid taking further action only if it determines that greenhouse gases do not contribute to climate change or if it provides some reasonable explanation as to why it cannot or will not exercise its discretion to determine whether they do.”¹⁵⁰ Notably, as to the issue of *Massachusetts’* standing¹⁵¹ to sue EPA, Justice Stevens cited a century-old U.S. Supreme Court opinion in which the Court held that the state of Georgia could sue an out-of-state company for cross-border air pollution because the state had an “interest independent of and behind its citizens in all the earth and air within its domain.”¹⁵² On December 15, 2009, EPA issued its endangerment findings,¹⁵³ that: (1) GHGs “endanger both the health and welfare of current and future generations”¹⁵⁴ and (2) the combined emissions of GHGs from new motor vehicles and new motor vehicle engines “contribute to the greenhouse gas air pollution that endangers public health and welfare.”¹⁵⁵ On May 7, 2010, EPA and the National Highway Traffic Safety Administration (NHTSA) promulgated regulations for light-duty vehicles,¹⁵⁶ and on September 15, 2011, promulgated regulations for medium- and heavy-duty vehicles.¹⁵⁷ On October 15, 2012, EPA and the NHTSA, with prompting from the Obama Administration, promulgated more stringent regulations for

148. *Id.* at 78.

149. *Massachusetts*, 549 U.S. at 528.

150. *Id.* at 532.

151. *Massachusetts v. Environmental Protection Agency* also is known for its broad interpretation of standing under Art. III of the U.S. Constitution. *See id.* at 516-26 (containing the Court’s standing analysis).

152. *Id.* at 518-19 (citing *Georgia v. Tenn. Copper Co.*, 206 U.S. 230, 237 (1907)).

153. 74 Fed. Reg. 66,496 (Dec. 15, 2009) (to be codified at 40 C.F.R. ch. 1).

154. *Id.* at 66,496, 66,523.

155. *Id.* at 66,496.

156. 75 Fed. Reg. 25,324 (May 7, 2010) (to be codified at 40 C.F.R. pt. 85, 86, 600; 49 C.F.R. pt. 531, 533, 536, et al.).

157. 76 Fed. Reg. 57,106 (Sept. 15, 2011) (to be codified at 40 CFR Parts 85, 86, 600, 1033, 1036, 1037, 1039, 1065, 1066, 1068).

vehicle model years 2017 and beyond.¹⁵⁸ Thus, in *Massachusetts v. Environmental Protection Agency*, the Court paved the way for regulating GHG emissions even though EPA had previously refused to do so.

Four years after *Massachusetts v. Environmental Protection Agency*, the U.S. Supreme Court decided *American Electric Power Co. v. Connecticut*,¹⁵⁹ the leading case addressing climate change claims based on common law. Plaintiffs—eight states, New York City, and two nonprofit land trusts—filed a claim under the federal common law of interstate nuisance against the five major power plants in several states.¹⁶⁰ The Court held that “the Clean Air Act and the EPA actions it authorizes displace any federal common law right to seek abatement of carbon-dioxide emissions from fossil-fuel fired power plants.”¹⁶¹ Justice Ginsburg, writing for the majority, explicitly left open the possibility for state common law nuisance claims.¹⁶² Several nuisance lawsuits in state court have followed.¹⁶³ Before ATL entered the arena, no other common law claim besides nuisance had been asserted in climate change cases.¹⁶⁴

III. Background: Atmospheric Trust Litigation

The urgency of climate change and the lack of comprehensive policies or well-established legal strategies to address it pave the way for developing and asserting new legal claims. In some circumstances, common law claims can be more effective than statutory claims in addressing environmental problems because the common law demonstrates “flexibility and ability to achieve justice and fairness in individual cases . . . and allows judges and jurors to apply experience and common sense even in the face of uncertainty.”¹⁶⁵ This part provides an overview of the common law public trust doctrine, which has been evolving in the United States for more than a century, and then introduces one of its most contemporary applications specifically tailored to address climate change: ATL.

158. 77 Fed. Reg. 62,624 (Oct. 15, 2012) (to be codified at 40 C.F.R. pt. 85, 86, 600).

159. *Am. Elec. Power Co. v. Connecticut*, 562 U.S. ___, 131 S. Ct. 2527 (2011).

160. 562 U.S. at ___, 131 S. Ct. at 2533-34.

161. 562 U.S. at ___, 131 S. Ct. at 2537.

162. 562 U.S. at ___, 131 S. Ct. at 2540.

163. See Gerrard, Howe & Barry, *supra* note 143.

164. See *id.*

165. See Michael D. Axline, *The Limits of Statutory Law and the Wisdom of Common Law*, in CREATIVE COMMON LAW STRATEGIES FOR PROTECTING THE ENVIRONMENT 53 (Clifford Rechtschaffen & Denise Antolini eds. 2007) (discussing the strengths and weaknesses of the common law in comparison to statutory law for protecting the environment).

A. Common Law Public Trust Doctrine

Notable among the possible common law claims to mitigate climate change is the public trust doctrine. Stripped of its nuances as to scope, substance, and application, the public trust doctrine essentially maintains that “certain crucial natural resources are the shared, common property of all citizens, cannot be subject to private ownership, and must be preserved and protected by the government.”¹⁶⁶ Before moving to a description of the status of ATL, it is necessary to briefly explore the public trust doctrine’s origins and modern applications.

1. Origins

Courts and scholars have traced the public trust doctrine back to two historical sources: ancient Roman law and English common law.¹⁶⁷ Professor Mary Christina Wood characterizes the public trust doctrine as “[a]n ancient and enduring principle, it has roots and reasoning that put it on par with the highest liberties of citizens living in a free society.”¹⁶⁸ Under the Roman Institutes of Justinian, “[b]y the law of nature these things are common to mankind—the air, running water, the sea and consequently the shores of the sea.”¹⁶⁹ In ancient Rome, these public trust assets were *res communes*, “that is, they were simply physically incapable of being converted to private ownership.”¹⁷⁰ It is unclear, however, whether Roman citizens had a right to enforce and assert their interests in these resources against the government.¹⁷¹

England’s common law public trust doctrine is similar in nature but narrower in scope than its ancient Roman counterpart. Under English common law, “[t]he title to land under tide waters . . . were . . . deemed to be vested in the king as a public trust, to subserve and protect the public right to use them as common highways for commerce, trade, and intercourse.”¹⁷² Although the king could transfer title to submerged lands to private owners, the public right to use the navigable waters above them could not be

166. Brief for Law Professors as Amici Curiae Supporting Plaintiffs, *Alec L. v. Lisa Jackson*, No. 3:11-cv-02203 EMC (filed N.D. Cal., Dec. 7, 2011), at 8.

167. See, e.g., Joseph L. Sax, *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 MICH. L. REV. 471, 475-77 (1970) (discussing the public trust doctrine’s historical origins).

168. Wood, ATL, *supra* note 1, at 1019.

169. Institutes of Justinian, 2.1.1.

170. Karl S. Coplan, *Public Trust Limits on Greenhouse Gas Trading Schemes: A Sustainable Middle Ground?*, 35 COLUM. J. ENVTL. L. 287, 320 (2010) (footnote omitted).

171. Sax, *supra* note 167, at 475.

172. Ill. Cent. R.R. Co. v. Illinois, 146 U.S. 387, 458 (1892).

abridged.¹⁷³ These two historical bases, similar in principle but different in scope, have shaped public trust doctrine jurisprudence in the United States and throughout the world.¹⁷⁴

Although American states began developing and applying public trust principles long before the U.S. Supreme Court first addressed the doctrine,¹⁷⁵ two high court opinions—*Illinois Central Railroad Co. v. Illinois*¹⁷⁶ and *Geer v. Connecticut*,¹⁷⁷ have been paramount to public trust analyses thereafter. In 1892, the U.S. Supreme Court in *Illinois Central* recognized and applied the American common law public trust doctrine for the first time.¹⁷⁸ At issue was the Illinois legislature's conveyance of absolute title to more than 1,000 acres¹⁷⁹ of submerged lands along Lake Michigan's shoreline to a private railway corporation.¹⁸⁰ Citing English common law,¹⁸¹ the equal footing doctrine,¹⁸² and public policy,¹⁸³ the Court held that the state had improperly abdicated its duty to preserve navigable waters and submerged lands for the public.¹⁸⁴ The gravity of the state's action compelled the Court to invalidate the land grant, despite a clear lack of judicial precedent. Justice Field stated:

We cannot, it is true, cite *any* authority where a grant of this kind has been held invalid, for we believe that no instance exists where the harbor of a great city and its commerce have been allowed to pass into the control of any private corporation. But the decisions are numerous which declare that such property is held by the state, by virtue of its sovereignty, in trust for the public.¹⁸⁵

173. *Id.*

174. Sax, *supra* note 167, at 475.

175. Robin Kundis Craig, *A Comparative Guide to the Eastern Public Trust Doctrines: Classifications of States, Property Rights, and State Summaries*, 16 PENN. ST. ENVTL. L. REV. 1, 1-5 (discussing American public trust law before *Illinois Central*).

176. *Illinois Central*, 146 U.S. 387.

177. *Geer v. Connecticut*, 161 U.S. 519 (1896).

178. *Illinois Central*, 146 U.S. 387.

179. *Id.* at 453.

180. *Id.* at 450.

181. *Id.* at 458.

182. *Id.* at 434.

183. *Id.* at 458.

184. *Id.* at 453.

185. *Id.* at 455.

The Court further held that the state's public trust duties rose to the same level of importance as its police powers.¹⁸⁶ The Court reasoned therefrom that the government's public trust duties to promote the public interest "can never be lost . . . or disposed of."¹⁸⁷ It is worth noting briefly that in 1988, the U.S. Supreme Court, in *Phillips Petroleum Co. v. Mississippi*,¹⁸⁸ held that the public trust doctrine applies to all tidal waters, regardless of navigability.¹⁸⁹

Three years after *Illinois Central*, the U.S. Supreme Court in *Geer* wove both English common law and ancient Roman law into American public trust doctrine jurisprudence.¹⁹⁰ The Court's decision to uphold a Connecticut statute regulating hunting¹⁹¹ relied upon the principle of "common ownership" as a common thread in English and Roman law.¹⁹² Justice White stated,

[T]he ownership of sovereign authority is in trust for all the people of the State, and hence, by implication, it is the duty of the legislature to enact such laws as will best preserve the subject of the trust and secure its beneficial use in the future to the people of the State.¹⁹³

In addition to further contouring the government's public trust duties, the Court also suggested that the doctrine's scope can extend beyond navigable waters and submerged lands to more broadly encompass *res communes*,¹⁹⁴ or "things which remain in common,"¹⁹⁵ including "the air, the water which runs in the rivers, the sea, and its shores."¹⁹⁶ Both English and Roman law, then, have shaped the American common law public trust doctrine.

2. Modern Applications

Nearly a century after *Illinois Central* and *Geer*, Professor Joseph Sax, in his seminal modern public trust doctrine article,¹⁹⁷ offered the legal basis for

186. *Id.* at 453.

187. *Id.*

188. *Phillips Petroleum Co. v. Mississippi*, 484 U.S. 469 (1988).

189. *Id.* at 481.

190. *Geer v. Connecticut*, 161 U.S. 519, 523-27 (1896).

191. *Id.* at 521, 534.

192. *Id.* at 526.

193. *Id.* at 534.

194. *Id.* at 525 (quoting POTHIER, *TRAITE DU DROIT DE PROPRIETE*, NOS. 27-28 (1772)).

195. *Id.*

196. *Id.*

197. Sax, *supra* note 167.

applying the doctrine beyond its historical reaches to address a number of environmental issues.¹⁹⁸ This “broad legal approach,”¹⁹⁹ Professor Sax argued, could pave the way for “judicial intervention”²⁰⁰ to remedy failing legislative and executive actions to protect the environment.²⁰¹ According to Professor Sax:

Of all the concepts known to American law, only the public trust doctrine seems to have the breadth and substantive content which might make it a useful tool of general application for citizens seeking to develop a comprehensive legal approach to resource management problems.²⁰²

Although Professor Sax acknowledged that the doctrine’s traditional applications were “quite narrow,”²⁰³ he argued that its principle was “broader than its traditional application indicates.”²⁰⁴

From Roman, English, and American law, Professor Sax distilled the following principle: “[C]ertain interests are so intrinsically important to every citizen that their free availability tends to mark the society as one of citizens rather than of serfs.”²⁰⁵ He characterized the doctrine as “not so much a substantive set of standards for dealing with the public domain as it is a technique by which courts may mend perceived imperfections in the legislative and administrative process. [T]he public trust concept is, more than anything else, a medium for democratization.”²⁰⁶ Since the time Professor Sax articulated his vision, and in large part thanks to his scholarship,²⁰⁷ courts have applied the public trust doctrine to inland

198. *Id.*

199. *Id.* at 474.

200. *Id.*

201. *Id.*

202. *Id.* (footnote omitted).

203. *Id.* at 556.

204. *Id.* at 557.

205. *Id.* at 484.

206. *Id.* at 509.

207. William D. Araiza, *Democracy, Distrust, and the Public Trust: Process-Based Constitutional Theory, the Public Trust Doctrine, and the Search for a Substantive Environmental Value*, 45 UCLA L. REV. 385, 387 (1997) (“The rebirth of the public trust doctrine is directly attributable to the publication of Joseph Sax’s seminal 1970 article calling attention to the doctrine, finding it already reflected in contemporary American law, and lauding its use as a tool for judicial supervision of resource-allocation decisions made by government.”) (footnotes omitted); *see also* M. Frank, *The Public Trust Doctrine*:

navigable waters, public access to navigable waters, water rights, water quality, fish and wildlife,²⁰⁸ and archeological sites.²⁰⁹

California and Hawai'i are known for having the most progressive public trust doctrines in the nation.²¹⁰ In 1983, the California Supreme Court, in *National Audubon Society v. Superior Court of Alpine County*,²¹¹ also known as the *Mono Lake* case, held that the public trust doctrine applied not only to tidelands but also to "all navigable lakes and streams"²¹² and to "nonnavigable tributaries."²¹³ The court further held that the public trust doctrine protects recreational and ecological values in addition to "the traditional triad of uses—navigation, commerce and fishing."²¹⁴ In 2000, citing *Mono Lake* and other progressive public trust opinions,²¹⁵ the Hawai'i Supreme Court, in *In re Water Use Permit Applications (Wai'āhole I)*,²¹⁶ extended public trust protections to groundwater and also adopted the precautionary principle for protecting the public trust.²¹⁷

The public trust doctrine has seen some progress in other countries.²¹⁸ In 1993, the Philippines Supreme Court in *Oposa v. Factoran*²¹⁹—"one of the

Assessing Its Recent Past & Charging Its Future, 45 U.C. DAVIS L. REV. 665, 671-79 (2012) (reviewing the current status of public trust law in the United States).

208. E.g., *Owichek v. State Guide Licensing Bd.*, 763 P.2d 488, 495-96 (Alaska 1988).

209. E.g., *Wade v. Kramer*, 459 N.E.2d 1025 (Ill. App. Ct. 1984).

210. Robin Kundis Craig, *A Comparative Guide to the Western States' Public Trust Doctrine: Public Values, Private Rights, and the Evolution Toward an Ecological Public Trust*, 37 ECOL. L.Q. 53, 86 (2010) [hereinafter *Western States*]. New Jersey and Washington also have progressive public trust doctrines. See *Matthews v. Bay Head* *Matthews v. Bay Head Improvement Ass'n*, 471 A.2d 355, 365 (N.J. 1972) ("Archaic judicial responses are not an answer to a modern social problem. Rather, we perceive the public trust doctrine not to be 'fixed or static,' but one to 'be molded and extended to meet changing conditions and needs of the public it was created to benefit.'"); see also *Weden v. San Juan Co.*, 958 P.2d 273, 283 (Wash. 1998) ("Since as early as 1821, the public trust doctrine has been applied throughout the United States 'as a flexible method for judicial protection of public interests").

211. *Nat'l Audubon Soc'y v. Superior Ct. of Alpine Cnty.*, 658 P.2d 709 (Cal. 1983).

212. *Id.* at 719.

213. *Id.* at 721.

214. *Id.* at 719.

215. *In re Water Use Permit Applications (Wai'āhole I)*, 9 P.3d 409, 452 (Haw. 2000).

216. *Id.*

217. *Id.* at 466.

218. See Michael C. Blumm & Rachel D. Guthrie, *Internationalizing the Public Trust Doctrine: Natural Law and Constitutional and Statutory Approaches to Fulfilling the Saxion Vision*, 45 U.C. DAVIS L. REV. 741 (2012) (discussing public trust doctrine applications in twelve countries in South Asia, Africa, and the Western Hemisphere); see also Mary

strongest judicial iterations of the public trust²²⁰—held that youth petitioners had standing to sue on behalf of “their generation as well as generations yet unborn.”²²¹ Petitioners were challenging the government’s rainforest deforestation practices.²²² The court reasoned that petitioners had standing based on a national policy guaranteeing the “right to a balanced and healthful ecology”²²³ and as a matter of basic human rights.²²⁴ Without standing to sue on behalf of future generations, the court stated, those generations “stand to inherit nothing but parched earth incapable of sustaining life.”²²⁵ The court further explained that the “right to a balanced and healthful ecology” comes with a “correlative duty to refrain from impairing the environment.”²²⁶ In India, the courts have incorporated the principles of public trust, precaution, and intergenerational equity into the nation’s jurisprudence with respect to environmental resources.²²⁷ The forward-looking nature of the public trust doctrine in the Philippines and India, if applied to the atmosphere in the United States and other countries, could better protect current and future citizens from climate change impacts projected for decades to come.²²⁸ The public trust doctrine’s modern applications bolster the emerging ATL legal theory.

Christina Wood et al., *Securing Planetary Life Sources for Future Generations, Legal Actions Deriving from the Ancient Sovereign Trust Obligation*, in THREATENED ISLAND NATIONS, LEGAL IMPLICATIONS OF RISING SEAS AND A CHANGING CLIMATE 531, 543-52 (Michael B. Gerrard & Gregory E. Wannier eds., 2013) (discussing public trust principles and applications throughout the world and in international law).

219. *Oposa v. Factoran*, 33 I.L.M. 173 (Philippines 1994).

220. Wood, ATL, *supra* note 1, at 1032.

221. *Oposa*, 33 I.L.M. at 177.

222. *Id.*

223. *Id.* at 179.

224. *Id.*

225. *Id.* at 188.

226. *Id.*

227. See Lavanya Rajamani & Shibani Ghosh, *India*, in CLIMATE CHANGE LIABILITY, TRANSNATIONAL LAW AND PRACTICE 139, 150-52 (Richard Lord et al. eds., 2012) (discussing how the three principles can support climate change litigants claiming prospective rights).

228. See Edith Brown Weiss, *The Planetary Trust: Conservation and Intergenerational Equity*, 11 ECOL. L.Q. 495 (1984) (discussing fiduciary duties to future generations); see also Bradford C. Mank, *Standing and Future Generations: Does Massachusetts v. EPA Open Standing for Future Generations?*, 34 COLUM. J. ENVTL. L. 1 (2009) (discussing the concepts of intergenerational equity and standing to sue on behalf of future generations).

B. Atmospheric Trust Litigation

Scholars and litigators are attempting to utilize the public trust doctrine to address climate change. Similar to the genesis and implementation of Professor Sax's vision for using the public trust doctrine to ensure environmental protection, ATL was borne in scholarship and is now a reality in the courts and in administrative proceedings.

1. The Atmosphere as a Public Trust Resource

The theory is simple but powerful. According to Professor Wood, the first scholar to conceptualize and develop the concept of ATL,²²⁹ the atmosphere is a public trust resource and the government has a duty to preserve it for future generations.²³⁰ Professor Wood asserted that the public trust doctrine logically applies to the atmosphere because "courts have looked to the needs of the public as a primary guiding factor."²³¹ According to Professor Wood, ATL can "enable enforcement of scientific prescriptions for carbon reduction" in jurisdictions such as the United States, where laws and regulations currently are inadequate.²³² Professor Wood has further explained that atmospheric trust responsibilities would require governments "to avoid irreparable harm to an asset that must sustain generations of citizens to come."²³³

2. Overview and Status of Atmospheric Trust Litigation

Despite significant support for ATL in scholarship,²³⁴ ATL is still in its infancy and has thus far achieved limited success on the ground. Since May 2011, Our Children's Trust has filed thirty-nine petitions for rulemaking, sixteen lawsuits, and sent one notice of intent to sue—which together cover two federal jurisdictions, every state in the nation, as well as Uganda and

229. But see Gerald Torres, *Who Owns the Sky?*, 18 PACE ENVTL. L. REV. 227 (2001) (exploring the concept of public trust protections for the atmosphere, but to a more limited degree than Professor Wood has).

230. Wood, ATL, *supra* note 1, at 1032.

231. *Id.* at 1021.

232. *Id.* at 1026 (footnote omitted).

233. Brief for Law Professors as Amici Curiae Supporting Plaintiffs, *Alec L. v. Lisa Jackson*, No. 3:11-cv-02203 EMC (filed N.D. Cal., Dec. 7, 2011), at 8.

234. According to an ATL amicus brief signed by Professor Sax and other environmental law professors, "[t]he central rationale and purpose of the public trust doctrine could hardly find a more compelling application than to air and the atmosphere which support the planetary climate system upon which all life on Earth depends." *Id.*

the Ukraine.²³⁵ One skeptical commentator describes this approach as “[l]awsuit roulette.”²³⁶ As to the federal lawsuit, on May 31, 2012, Judge Wilkins of the U.S. District Court for the District of Columbia in *Alec L. v. Jackson*²³⁷ dismissed plaintiffs’ ATL claims for lack of subject matter jurisdiction.²³⁸ The court relied on *PPL Montana, LLC v. Montana*²³⁹ to support its conclusion that it lacked jurisdiction. In *PPL Montana*, the U.S. Supreme Court stated, “the public trust doctrine remains a matter of state law” and its “contours . . . do not depend upon the Constitution.”²⁴⁰ The court in *Alec L.* further held that, even if plaintiffs had properly invoked federal jurisdiction, the Clean Air Act displaced further federal regulation on this matter, following the ruling in *American Electric Power*.²⁴¹ On the merits, the court narrowly applied public trust doctrine jurisprudence, stating:

[Plaintiffs] have cited no cases, and the Court is aware of none, that have expanded the [public trust] doctrine to protect the atmosphere or impose duties on the federal government. Therefore, the manner in which Plaintiffs seek to have the public trust doctrine applied in this case represents a significant departure from the doctrine as it has been traditionally applied.²⁴²

On May 22, 2013, the U.S. District Court for the District of Columbia denied plaintiffs’ motion to reconsider.²⁴³

ATL has seen more, albeit limited, progress at the state level. Although no administrative agency has granted an ATL plaintiff’s petition for rulemaking thus far, several lawsuits are still making their way through the judicial system, and some have received favorable or partially favorable rulings. For example, in 2012, a Texas district court, in *Bonser-Lain v. Texas*,²⁴⁴ invalidated the Texas Commission on Environmental Quality’s finding in an

235. See *Legal Action*, OUR CHILDREN’S TRUST, <http://ourchildrenstrust.org/Legal> (listing the status of all ATL petitions and lawsuits managed by Our Children’s Trust).

236. Victor Schwarz et al., *Lawsuit Roulette: Pursuit of “Children’s Trust” Climate Change Litigation*, WASHINGTON LEGAL FOUNDATION LEGAL BACKGROUNDER (July 8, 2011).

237. *Alec L. v. Jackson*, 863 F. Supp. 2d 11 (D.C.C. 2012).

238. *Id.*

239. *PPL Montana, LLC v. Montana*, 565 U.S. ___, 132 S. Ct. 1213 (2012).

240. 565 U.S. at ___, 132 S. Ct. at 1235.

241. *Alec L.*, 863 F. Supp. 2d at 14-16.

242. *Id.* at 13.

243. *Alec L. v. Perciasepe*, No. 11-cv-2235, memorandum op. at 3 (D.C.C. May 22, 2013).

244. *Bonser-Lain v. Texas*, No. D-1-GN-11-002194 (Tex. Dist. Ct. Aug. 2, 2012).

administrative proceeding that the public trust doctrine applied only to water.²⁴⁵ Looking to the Texas constitutional provision that requires “conservation and development of all of the natural resources of the State,”²⁴⁶ the court stated, “the public trust doctrine includes all natural resources of the State including the air and atmosphere.”²⁴⁷ In addition, the court clarified that the federal Clean Air Act is a “floor, not a ceiling, for the protection of air quality,” thus rejecting the defendant’s preemption argument.²⁴⁸ This finding, though briefly stated, seemed to impliedly distinguish *Bonser-Lain* from *American Electric Power*, in which the U.S. Supreme Court found preemption of the plaintiff’s nuisance claim under the Clean Air Act.²⁴⁹ The Texas court ultimately deferred to the defendant’s decision to not proceed with plaintiff’s request for rulemaking because the decision was a “reasonable exercise” of the agency’s discretion.²⁵⁰ Two additional ATL cases have been at least partially successful and are still in progress. In July 2012, a New Mexico district court, in *Sanders-Reed v. Martinez*,²⁵¹ denied the defendant governor’s motion to dismiss,²⁵² but in July 2013, granted the governor’s motion for summary judgment.²⁵³ In March 2013, the Iowa Court of Appeals, in *Filippone v. Iowa Department of Natural Resources*,²⁵⁴ declined to expand the public trust doctrine to the atmosphere,²⁵⁵ but Judge Doyle wrote a favorable concurrence, stating, “I agree there is no Iowa case law for extending the public trust doctrine to include the atmosphere. But I believe there is a sound policy basis for doing so.”²⁵⁶ In October 2013, the Alaska Supreme Court heard oral arguments on the Alaska ATL lawsuit.²⁵⁷

245. *Id.* at *1.

246. TEX. CONST. art. XVI, § 59.

247. *Bonser-Lain*, No. D-1-GN-11-002194, at *1.

248. *Id.* at *2.

249. *Am. Elec. Power Co. v. Connecticut*, 562 U.S. ___, 131 S. Ct. 2527, 2537 (2011).

250. *Bonser-Lain*, No. D-1-GN-11-002194, at *2.

251. *Sanders-Reed v. Martinez*, No. D-101-CV-2011-01514 (N.M. 1st Dist. Ct. July 14, 2012).

252. *Id.* at *2.

253. *Sanders-Reed v. Martinez*, No. D-101-CV-2011-01514 (N.M. 1st Dist. Ct. July 4, 2013), at *1.

254. *Filippone v. Iowa Dep’t of Nat. Resources*, No. 2-1005/13-0444 (Iowa Ct. App. Mar. 13, 2013).

255. *Id.*, at *8.

256. Discussed *infra* Section IV.A.3.a.

257. *Alaska*, OUR CHILDREN’S TRUST, <http://ourchildrenstrust.org/state/alaska> (last visited Oct. 18, 2013).

3. Hawai'i Petition for Rulemaking

To date, no ATL plaintiff has filed a claim in a Hawai'i state court. But on May 4, 2011, seventeen-year-old Honolulu resident Joshua Hamilton Scott and Kids vs. Global Warming filed an administrative petition with the DOH under Hawai'i Revised Statutes section 91-6, "[o]n behalf of themselves, the citizens of the State of Hawaii, and present and future generations of minor children,"²⁵⁸ requesting the adoption of a rule that would reduce atmospheric CO₂ concentrations to 350 ppm by 2100.²⁵⁹ Petitioners claimed that "[t]he public trust doctrine demands that the state of Hawaii act to preserve the atmosphere and provide a livable future for present and future generations of Hawaii residents."²⁶⁰ Petitioners further contended that even if the state were to achieve Act 234's mandates, these reductions would be inadequate to protect the atmospheric public trust.²⁶¹ Like other ATL petitions for rulemaking and lawsuits, petitioners requested that the rule:

- (1) Ensure that carbon dioxide emissions from fossil fuels peak in the year 2012;
- (2) Adopt a carbon dioxide emissions reduction plan that, consistent with the best available science as described in the attached report, reduces state-wide fossil fuel carbon dioxide emissions by at least 6% annually until at least 2050, and expands Hawaii's capacity for carbon sequestration;
- (3) Establishes a state-wide greenhouse gas emissions accounting, verification and inventory and issues annual progress reports so that the public has access to accurate data regarding the effectiveness of Hawaii's efforts to reduce fossil fuel carbon dioxide emissions; and
- (4) Adopt any necessary policies or regulations to implement the greenhouse gas emissions reduction plan, as detailed in sections (1) and (2) above.²⁶²

On June 2, 2011, the DOH denied the petition, referenced the state's efforts under Act 234 and HCEI and stated, "we in Hawaii are taking climate change seriously and we intend to reduce Hawaii's GHG emissions significantly."²⁶³ Since then, Our Children's Trust informally submitted information about the

258. Scott ATL Petition, *supra* note 2, at 3.

259. *Id.* at 4.

260. *Id.* at 33.

261. *Id.* at 2.

262. *Id.* at 3.

263. Gill Response Letter, *supra* note 17.

organization, Kids vs. Global Warming, and iMatter to the DOH during the official comment period on the DOH's draft GHG emissions rules.²⁶⁴ Joshua, now nineteen years old and a sophomore at the University of Hawai'i at Mānoa, said he no longer is involved with Kids vs. Global Warming and does not foresee himself engaging in climate change activism in the future.²⁶⁵ "I've sort of given up faith in humanity," he said.²⁶⁶

IV. Analysis: How Hawai'i's Public Trust Doctrine Can Support Atmospheric Trust Litigation to Address Climate Change

As ATL lawsuits and petitions for rulemaking make their way through the courts and administrative proceedings, Kids vs. Global Warming has been looking toward filing a claim in Hawai'i state court.²⁶⁷ This part analyzes whether Hawai'i's public trust doctrine applies to the atmosphere, and if so, whether the state has breached its fiduciary duty to protect it for future generations. Finally, this part explores the practical implications of granting declaratory and injunctive relief in a Hawai'i ATL case.

A. The Atmosphere as a Public Trust Resource in Hawai'i: Legal Bases

Before moving to the issues of breach and granting relief in a Hawai'i ATL case, it is necessary to first examine whether Hawai'i's public trust doctrine applies to the atmosphere. According to the Hawai'i Supreme Court, Hawai'i's public trust doctrine has three historical bases: (1) American common law, (2) Hawaiian Kingdom law and custom, and (3) the Hawai'i Constitution.²⁶⁸ Furthermore, in *Wai'āhole I*—the first case to review and apply all three bases²⁶⁹—the Hawai'i Supreme Court looked to "elements from Hawai'i law and prominent cases from other jurisdictions"²⁷⁰ to establish that "[t]he public trust, by its very nature, does not remain fixed

264. These informal submissions are on file with the author.

265. Interview with Joshua Hamilton Scott, former petitioner in Hawai'i ATL petition, in Honolulu, Haw. (Mar. 13, 2013).

266. *Id.*

267. Telephone Interview with Victoria Looz, Exec. Director, Kids vs. Global Warming (Feb. 28, 2013).

268. *Wai'āhole I*, 9 P.3d 409, 439-43 (Haw. 2000).

269. D. Kapua'ala Sproat & Isaac H. Moriwake, *Ke Kalo Pa'a O Wai'āhole: Use of the Public Trust as a Tool for Environmental Advocacy*, in CREATIVE COMMON LAW STRATEGIES FOR PROTECTING THE ENVIRONMENT 247, 261 (Clifford Rechtschaffen & Denise Antolini eds., 2007).

270. *Id.*

for all time, but must conform to changing needs and circumstances.”²⁷¹ This notion of flexibility is consistent with the modern public trust doctrine view that “[c]ourts look to the needs of the public in defining the scope of the trust resources.”²⁷² This section analyzes all three historical bases for the state’s public trust doctrine to determine whether the atmosphere is a public trust resource in Hawai‘i. From the perspective that Hawai‘i’s public trust doctrine evolved to accommodate modern needs, this analysis identifies several legal “handles” that could support a case for the atmospheric public trust in Hawai‘i courts.

1. American Common Law

Hawai‘i’s public trust doctrine, at common law, flows directly from the American doctrine. In 1899, seven years after the U.S. Supreme Court decided *Illinois Central*, the Hawai‘i Supreme Court for the Republic of Hawai‘i,²⁷³ in *King v. Oahu Railway & Land Company*,²⁷⁴ first adopted and applied the public trust doctrine within the context of navigable waters and submerged lands.²⁷⁵ The government granted the company a lease for the Honolulu Harbor and its adjacent lands.²⁷⁶ The government sought to repossess the leased property in its entirety for the purposes of building and maintaining public wharves.²⁷⁷ In response, the company asserted a “perpetual right” to use the property for commercial navigation, transportation, and shipping.²⁷⁸ Adopting and following the reasoning in *Illinois Central*,²⁷⁹ the court in *King* ultimately denied the company’s asserted

271. *Wai‘āhole I*, 9 P.3d at 447.

272. Brief for Law Professors as Amici Curiae Supporting Plaintiffs, *Chernaik v. Kitzhaber*, Case No. 16-11-09273, at 10 (filed Or. Ct. App., Dec. 2012).

273. Hawai‘i courts have undergone several name changes to reflect the governing body of the particular time period. In January 1893, U.S. Minister John L. Stevens and a small group of non-Hawaiian residents of the Kingdom of Hawai‘i illegally overthrew the Hawaiian Monarchy despite Queen Liliuokalani’s formal protest and instituted a Provisional Government. S.J. Res. 19, 103d Cong. (1993). In July 1894, the Provisional Government declared itself to be the Republic of Hawai‘i, which remained in effect until April 1900, when President McKinley signed the Organic Act establishing the Territorial Government. *Id.* In 1959, Hawai‘i became the 50th State of the United States. *Id.*

274. *King v. Oahu Railway & Land Co.*, 11 Haw. 717 (1899).

275. *Id.* at 725.

276. *Id.* at 718.

277. *Id.* at 719.

278. *Id.*

279. *Id.* at 723-25.

right²⁸⁰ and declared that “[t]he people of Hawaii hold the absolute rights to all its navigable waters and the soils under them for their own common use. The lands under the navigable waters in and around the territory of the Hawaiian Government are held in trust for the public uses of navigation.”²⁸¹ Relying on *King*, in 1973, the Hawai‘i Supreme Court, in *County of Hawaii v. Sotomura*,²⁸² later applied the public trust doctrine to shoreline lands “below the high water mark.”²⁸³ Thus, Hawai‘i’s public trust doctrine, at common law, can be traced back to *Illinois Central*.

ATL defendants likely would argue that because Hawai‘i’s common law public trust doctrine descends from *Illinois Central*, the doctrine’s scope cannot extend beyond navigable waters or lands below the high water mark. In *Illinois Central*, Justice Field drew from English common law, which granted public trust protection for “lands under tide waters,”²⁸⁴ to conclude that the “soil under navigable waters” was held in trust by the states.²⁸⁵ In jurisdictions that have narrowly interpreted *Illinois Central*, an ATL defendant’s argument could have merit. For example, on January 30, 2012, in *Aronow v. Minnesota Department of Pollution Control*,²⁸⁶ District Judge Guthman granted defendant’s motion to dismiss the Minnesota ATL plaintiff’s claims, stating, “Minnesota Courts have recognized the Public Trust Doctrine only as it applies to navigable waters.”²⁸⁷ Similar to Minnesota common law, the initial Hawai‘i cases following *Illinois Central*—*King* and *Sotomura*—could be read to limit Hawai‘i’s common law public trust doctrine in the same manner.

ATL plaintiffs, however, could make a strong claim to the contrary. ATL proponents would argue that Hawai‘i’s common law public trust doctrine, even though the progeny of *Illinois Central*, stands for the proposition that “throughout history, law has evolved as courts respond to unforeseen, often urgent, circumstances. The same fiduciary principles that have informed all historic public trust cases apply with force to protect the atmosphere.”²⁸⁸ This proposition not only is consistent with the Hawai‘i Supreme Court’s characterization of the doctrine as flexible and evolutionary

280. *Id.* at 738.

281. *Id.* at 725.

282. *Cnty. of Hawaii v. Sotomura*, 517 P.2d 57 (Haw. 1973).

283. *Id.* at 63.

284. *Ill. Cent. R.R. Co. v. Illinois*, 146 U.S. 387, 458 (1892).

285. *Id.* at 459.

286. *Aronow v. Minn. Dep’t of Pollution Control*, No. 62-CV-11-3952 (Minn. Dist. Ct. Jan. 31, 2012).

287. *Id.* at *5.

288. Brief for Law Professors as Amici Curiae Supporting Plaintiffs, *Chernaik v. Kitzhaber*, Case No. 16-11-09273, at 18 (filed Or. Ct. App., Dec. 2012).

in nature,²⁸⁹ but also has been embodied in another major Hawai'i public trust opinion decided under the common law. In 1977, the Hawai'i Supreme Court, in *State v. Zimring*,²⁹⁰ applied the doctrine to lava extensions, or new lands created from a volcanic eruption.²⁹¹ Chief Justice Richardson acknowledged, "[n]o court sitting at common law has had the occasion to deal with the question of lava extensions."²⁹² Chief Justice Richardson applied the public trust doctrine to the lava extensions nonetheless because:

[E]quity and sound policy demand that such land inure to the benefit of all the people of Hawaii, in whose behalf the government acts as trustee. Given the paucity of land in our island state and the concentration of private ownership in relatively few citizens, a policy enriching only a few would be unwise. Thus we hold that lava extensions vest when created in the people of Hawaii, held in public trust by the government for the benefit, use and enjoyment of all the people.²⁹³

When it acknowledged the doctrine in 1892, the *Illinois Central* Court could not have imagined that volcanic eruptions would create new land in need of public trust protection, but the Hawai'i Supreme Court applied the doctrine as policy and necessity required, in the absence of judicial precedent. In an ATL case, a Hawai'i court could be similarly swayed by the fact that:

The public interests at stake in climate crisis are unfathomable leagues beyond the traditional fishing, navigation and commerce interests at the forefront of *Illinois Central* There is no question that treating the atmosphere as a public trust asset is consistent with the central purpose of the public trust doctrine.²⁹⁴

ATL proponents also would argue that, through *Geer*, American public trust law traces back to Roman law, which enumerates the "air" as a public trust resource.²⁹⁵ Hawai'i case law supports this position. In *Wai'āhole I*, Justice Nakayama acknowledged, with respect to the scope of the trust, "[i]n its ancient Roman form, the public trust included 'the air, running water, the

289. *Wai'āhole I*, 9 P.3d 409, 447 (Haw. 2000).

290. *State v. Zimring*, 566 P.2d 725 (Haw. 1977).

291. *Id.* at 735.

292. *Id.* at 734.

293. *Id.* at 735.

294. Wood, ATL, *supra* note 1, at 1021.

295. Institutes of Justinian, 2.1.1.

sea, and consequently the shores of the sea.”²⁹⁶ Applying the Roman doctrine to a Hawai’i ATL case, then, could further support the atmospheric public trust under American common law.

2. Hawaiian Kingdom Law and Tradition

Hawai’i’s public trust doctrine also is uniquely rooted in Hawaiian Kingdom law and tradition. Around the same time that the Hawai’i Supreme Court adopted and applied the public trust doctrine to navigable waters in *King*, it “did not apply similar principles to freshwater resources. Instead . . . the court turned in the opposite direction and commodified freshwater as private property.”²⁹⁷ In 1973, the Hawai’i Supreme Court, in *McBryde Sugar Company v. Robinson*,²⁹⁸ for the first time applied the public trust doctrine to freshwater resources.²⁹⁹ Interestingly, the court made no mention of *Illinois Central*, but instead rooted its holding in Hawaiian Kingdom law.³⁰⁰ In 1848, King Kamehameha III “proclaimed that he was sharing the lands in the Hawaiian Kingdom with his people,”³⁰¹ thus beginning a land division process known as the Mahele, or Great Mahele.³⁰² Essentially, the Mahele “transformed Hawai’i’s land system from collective to private ownership, modeled after Western concepts.”³⁰³ As part of the Mahele process, Kamehameha III explicitly reserved for himself, in his capacity as the sovereign, five “prerogatives, powers and duties, His Majesty ought not, and ergo, he cannot surrender.”³⁰⁴ One of these rights and obligations was “[t]o encourage and even to enforce the usufruct of lands for the common good.”³⁰⁵ The court in *McBryde* relied on the reservation of usufructory rights to conclude that the public trust doctrine applied to freshwater resources in Hawai’i.³⁰⁶ In 1982, the Hawai’i Supreme Court in

296. *Wai’āhole I*, 9 P.3d 409, 445 (Haw. 2000) (citing Institutes of Justinian, 2.1.1).

297. Sproat & Moriwake, *supra* note 269, at 254 (citing Hawaiian Commercial & Sugar Co. v. Wailuku Sugar Co., 15 Haw. 675, 680 (Haw. 1904)).

298. *McBryde Sugar Co. v. Robinson*, 504 P.2d 1330 (Haw. 1973).

299. *Id.* at 1338.

300. *Id.* at 1337-38.

301. *Id.*

302. *Id.*

303. JON M. VAN DYKE, WHO OWNS THE CROWN LANDS OF HAWAII? 5 (2008); *see id.* at 19-58 (explaining the pre-Mahele land system and the Mahele process).

304. Principles Adopted by the Land Commission, 1846-1847, *reprinted in* VAN DYKE, *supra* note 303, at 385, 388.

305. *Id.* at 388-89.

306. *McBryde Sugar Co. v. Robinson*, 504 P.2d 1330, 1338 n.11 (Haw. 1973).

*Robinson v. Ariyoshi*³⁰⁷ again found a basis for Hawai'i's water resources trust in Hawaiian Kingdom law,³⁰⁸ and added that the doctrine also was rooted in "Native Hawaiian practices respecting water, from which our water law ostensibly springs."³⁰⁹ Thus, both usufructory rights and Native Hawaiian tradition concerning the air or atmosphere could provide a basis for Hawai'i's atmospheric public trust.

First, ATL plaintiffs could argue that usufructory rights apply to the air or atmosphere. Under Roman law, "[u]sfructus is the right of using, and taking the fruits of things belonging to others, so long as the substance of the things used remains. It is a right over a corporeal thing, and if this thing perish, the usufructus itself necessarily perishes also."³¹⁰ Similarly, Black's Law Dictionary defines "usufruct" as "the right to use another's property for a time without damaging or diminishing it, although the property might naturally deteriorate over time."³¹¹ Although usufructory rights traditionally have applied to water law,³¹² one could argue that these rights apply to the atmosphere as well. According to Professor Karl Coplan, the concept of usufructory rights stand for the broader concept of sustainability and intergenerational equity that courts have woven throughout public trust opinions.³¹³ He characterizes usufructory rights as a principle that can broadly apply to atmospheric GHG emissions reductions in order to "preserve a hospitable planet."³¹⁴ Narrowly limiting usufructory rights to water resources and other tangible aspects of land, however, could defeat this claim.

Second, Hawai'i's atmospheric public trust could have a basis in Native Hawaiian tradition. Although the assertion that Native Hawaiians held the atmosphere in public trust could seem far-fetched at first blush, several sources have indicated otherwise. For example, according to one cultural study from 2001:

307. *Robinson v. Ariyoshi*, 658 P.2d 287 (Haw. 1982).

308. *Id.* at 311 (citing Enactment of Further Principles, Act of Aug. 6, 1850, L. 1850, at 202).

309. *Id.* at 310.

310. Institutes of Justinian, 2.4.

311. BLACK'S LAW DICTIONARY 1542 (7th ed. 1999).

312. E.g., Sax, *supra* note 167, at 485 ("The best known example [of the public trust doctrine] is found in the rule of water law that one does not own a property right in water in the same way he owns his watch or his shoes, but that he owns only an usufruct—an interest that incorporates the needs of others.").

313. Coplan, *supra* note 170, at 322-28.

314. *Id.* at 328.

The *‘āina* (land), *wai* (water), *kai* (ocean), and *lewa* (sky) were the foundation of life and the source of the spiritual relationship between people and their environs All forms of the natural environment—from the skies and mountain peaks, to the watered valleys and plains, to the shore line and ocean depths—were the embodiments of Hawaiian gods and deities. One Hawaiian genealogical account, records that Wākea (the expanse of the sky) and Papa-hānaumoku . . . gave birth to the islands Respect and care for nature, in turn meant that nature would care for the people.³¹⁵

Thus, according to this account, the sky played a role in the creation of the Hawaiian Islands and the Hawaiian people cared for all aspects of nature as a matter of culture and tradition. This is consistent with one account of the public trust doctrine’s role in Hawaiian Kingdom:

The high chief, or mo’i, acted as a trustee over both the people and all natural resources. The chief did not have absolute ownership of the land The chief was responsible for ensuring the conservation of these natural resources on behalf of the gods. Thus, although the *maka’ainana* [i.e., commoners] were granted liberal access within the *ahupua’a* [i.e., Hawaiian land division] to utilize its natural resources, such use was subject to regulations and rules to ensure the ultimate conservation of these resources.³¹⁶

Although ATL defendants would claim that in ancient times, Native Hawaiians did not use the atmosphere in the same way that GHG emitters use it today, and therefore could not have developed practices for protecting it from GHG emissions, the Hawai’i Supreme Court in *Wai’āhole I* established that the public trust doctrine “does not remain fixed for all time, but must conform to changing needs and circumstances.”³¹⁷ Because of the “vital importance of all waters to the public welfare,”³¹⁸ the court extended public trust protections to groundwater, even though traditional Native Hawaiian

315. KEPĀ MALY, *MALAMA PONO I KA ‘ĀINA—AN OVERVIEW OF THE HAWAIIAN CULTURAL LANDSCAPE I* (2001).

316. Kent D. Morihara, Note, *Hawai’i Constitution, Article XI, Section 1: The Conservation, Protection, and Use of Natural Resources*, 19 U. HAW. L. REV. 177, 203 (1997) (footnotes omitted).

317. *Wai’āhole I*, 9 P.3d 409, 447 (Haw. 2000).

318. *Id.* at 446.

practices concerning the resource were uncertain.³¹⁹ The court focused in part on the hydrological connection between surface water and groundwater to support expansion of the public trust.³²⁰ Thus, given Native Hawaiian tradition concerning the sky, the inextricable connection between the atmosphere and the sky,³²¹ and the atmosphere's "vital importance . . . to the public welfare,"³²² there is some basis upon which a Hawai'i court could expand the public trust doctrine to protect the atmosphere based on Native Hawaiian tradition. Expert testimony would be necessary to support this assertion.

3. Hawai'i Constitution

The Hawai'i Constitution formalizes the state's public trust doctrine and provides the third and most recent basis for the doctrine in Hawai'i. During the 1978 Hawai'i constitutional convention, the delegates added, among other provisions, article XI, section 1, which states:

For the benefit of present and future generations, the State and its political subdivisions shall *conserve and protect* Hawaii's natural beauty and *all natural resources*, including land, water, *air*, minerals and energy sources, and shall promote the development and utilization of these resources in a manner consistent with their conservation and in furtherance of the self-sufficiency of the State. *All public natural resources are held in trust by the State for the benefit of the people.*³²³

The Hawai'i Supreme Court has since made clear that "[t]he public trust . . . is a state constitutional doctrine. As with other state constitutional guarantees, the ultimate authority to interpret and defend the public trust in Hawai'i rests with the courts of this state."³²⁴ In interpreting a constitutional provision, the Hawai'i Supreme Court looks to four factors: (1) plain meaning, (2) framer's intent, (3) other constitutional provisions, and (4) the circumstances and history that preceded it.³²⁵ A court would likely examine

319. *Id.* at 446, 447 n.3.

320. *Id.* at 447.

321. AIRS: *Atmosphere Layers*, NASA JET PROPULSION LABORATORY, CALIFORNIA INSTITUTE OF TECHNOLOGY, http://airs.jpl.nasa.gov/maps/satellite_feed/atmosphere_layers/ (last visited Mar. 4, 2013) (describing "air" as a component of all five layers of the atmosphere).

322. *Wai'āhole I*, 9 P.3d at 447.

323. HAW. CONST. art. XI, § 1 (emphasis added).

324. *Wai'āhole I*, 9 P.3d at 445.

325. *Id.* at 443.

these factors to determine whether the atmosphere is a public trust resource in Hawai'i under article XI, section 1. Examined together, these factors create a solid basis for the atmospheric public trust.

a. Plain Meaning

The plain meaning of article XI, section 1 suggests that Hawai'i's public trust doctrine applies broadly to all natural resources, including the atmosphere. The provision states, "all public natural resources"—including "air"—are "held in trust by the State for the benefit of the people."³²⁶ As a threshold matter, the provision likely applies to the atmosphere because all five layers of the atmosphere are comprised of various molecular arrangements of air³²⁷ and because the atmosphere is a public natural resource.³²⁸ Furthermore, article XI, section 1 arguably establishes public trust responsibilities and protections for these resources because the provision explicitly includes the phrase "held in trust" and creates an affirmative governmental duty to "conserve and protect" natural resources "[f]or the benefit of present and future generations."³²⁹ Although the plain meaning of article XI, section 1 does not explicitly establish a public trust in all public natural resources, the governmental duties of conservation and protection, along with the concepts of trusts and intergenerational equality, provide a strong argument for the public trust doctrine to apply to the atmosphere.³³⁰ According to Professor William Araiza, constitutional provisions, like article XI, section 1, that "alter the legal relationship between the government and the resource, or between the government and the people of the state" are prime candidates for interpretation as a public trust provision.³³¹ Thus, a plain reading of article XI, section 1 seems to tip in favor of an atmospheric public trust in Hawai'i.

The most favorable ATL ruling to date could support this interpretation of article XI, section 1. In *Bonser-Lain*, District Judge Triana

326. HAW. CONST. art. XI, § 1.

327. AIRS: *Atmosphere Layers*, *supra* note 321.

328. See *United States v. Causby*, 328 U.S. 256, 261 (1946) (denying private claims to the airspace because it would "clog these highways, seriously interfere with their control and development in the public interest, and transfer into private ownership that to which *only the public has a just claim*") (emphasis added).

329. HAW. CONST. art. XI, § 1.

330. Mary Christina Wood, *Advancing the Sovereign Trust of Government to Safeguard the Environment for Present and Future Generations* (Part I): *Ecological Realism and the Need for a Paradigm Shift*, 39 ENVTL. L. 43, 43 (2009) ("At the core of the doctrine is the principle that every sovereign government holds vital natural resources in 'trust' for the public—i.e., present and future generations of citizen beneficiaries.").

331. Araiza, *supra* note 207, at 446.

relied in part on the plain meaning of a Texas constitutional provision to conclude, “the public trust doctrine includes all natural resources of the State including the air and atmosphere.”³³² In particular, article XVI, section 59 of the Texas Constitution states:

The conservation and development of *all of the natural resources of this State . . .* and the preservation and conservation of *all such natural resources of the State* are each and all hereby declared public rights and duties; and the Legislature shall pass any such laws as may be appropriate thereto.³³³

Similar to the Texas provision, article XI, section 1 of the Hawai‘i Constitution creates governmental duties to conserve “all public natural resources.”³³⁴ The Hawai‘i provision arguably provides even stronger grounds for acknowledging the atmospheric public trust than does the Texas provision because the former explicitly includes the phrase “held in trust” and enumerates “air” among the resources protected.³³⁵ As far as state ATL claims are concerned, ruling that the atmosphere is a public trust resource based on a broadly phrased constitutional provision would not be unprecedented.

In *Filippone*, an ATL case involving a statute with language similar to article XI, section 1 of the Hawai‘i Constitution, the Iowa Court of Appeals reached a result contrary to *Bonser-Lain*. The Iowa statute stated the following:

The general assembly finds that:

1. The citizens of Iowa have built and sustained their society on Iowa’s *air*, soils, waters and rich diversity of life. The well-being and future of Iowa depend on these natural resources.

. . . .

4. The *air*, waters, soils, and biota of Iowa are interdependent and form a complex ecosystem in a sustainable condition, without severe or irreparable damage caused by human activities.³³⁶

332. *Bonser-Lain v. Texas*, No. D-1-GN-11-002194, at *1 (Tex. Dist. Ct. Aug. 2, 2012).

333. TEX. CONST. art. XVI, § 59 (emphasis added).

334. HAW. CONST. art. XI, § 1.

335. *Id.*

336. 1989 IOWA ACTS CH. 236 § 2, Iowa Code § 455A.15 (emphasis added).

Furthermore,

It is the policy of the state of Iowa to protect its natural resource heritage of *air*, soils, waters, and wildlife for the benefit of present and future citizens with the establishment of a resource enhancement program.³³⁷

Although Judge Stovall acknowledged that Iowa's common law public trust doctrine had been expanded "to embrace the public's use of lakes and rivers for recreational purposes,"³³⁸ the court deferred to the Iowa Supreme Court's prior refusal to apply the doctrine to forested areas and public alleyways, and its warning against applying the doctrine broadly.³³⁹ An ATL claim in Hawai'i would be distinguishable from *Filippone* because, unlike the Hawai'i Supreme Court, which has acknowledged article XI, section 1 as a public trust provision,³⁴⁰ the Iowa courts have never applied the statute in a public trust analysis, but instead have limited the doctrine to the common law.³⁴¹ In addition, rather than "caution[ing] against an overextension of the [public trust] doctrine,"³⁴² as the Iowa Supreme Court has, the Hawai'i Supreme Court instead has consistently supported and allowed for its expansion.³⁴³ Finally, in a concurring opinion in *Filippone*, Judge Doyle acknowledged that the statute could support an atmospheric public trust in Iowa, but found it appropriate to reserve this issue for the Iowa Supreme Court to decide on appeal.³⁴⁴ Thus, some judges in ATL cases have demonstrated that constitutional provisions or statutes with language broadly protecting natural resources or explicitly protecting the air can be interpreted in an ATL plaintiff's favor.

b. Framers' Intent

The proceedings of the 1978 Hawai'i Constitutional Convention,³⁴⁵ cited at length in *Wai'āhole I*,³⁴⁶ provide clues as to the framers' intent behind

337. *Id.* § 3; Iowa Code § 455A.16 (emphasis added).

338. *Filippone v. Iowa Dep't of Nat. Resources*, No. 12-0444, at *2 (Iowa Ct. App. Mar. 13, 2013).

339. *Id.* at *2-3 (citing *State v. Sorenson*, 436 N.W.2d 358, 363 (Iowa 1989)).

340. *Wai'āhole I*, 9 P.3d 409, 444 (Haw. 2000).

341. *E.g., Philippone*, No. 2-1005/13-0444, at *2-3.

342. *State v. Sorenson*, 436 N.W.2d 358, 363 (Iowa 1989).

343. *E.g., Wai'āhole I*, 9 P.3d at 447.

344. *E.g., Philippone*, No. 2-1005/13-0444, at *8-9.

345. 2 PROCEEDINGS OF THE CONSTITUTIONAL CONVENTION OF HAWAII OF 1978 (1980).

article XI, section 1.³⁴⁷ With respect to article XI, section 1, Delegate Hoe stated, “this section is an important step toward making a balance between the use of our natural resources . . . and their preservation.”³⁴⁸ He continued, “[t]his proposal strives to make clear that our obligations include the welfare of future generations and therefore in the use of our resources we must protect our natural resources against irreversible depletion, waste or destruction and safeguard the natural beauty of our state.”³⁴⁹ Aligned with core public trust principles of protection and sustainability,³⁵⁰ the constitutional delegates intended to create a state duty to protect all natural resources against “depletion, waste or destruction.”³⁵¹

One counterargument regarding framers’ intent could focus on the fact that the delegates explicitly discussed at length the public trust doctrine with respect to water resources only.³⁵² In fact, the delegates contemplated adding the term “public trust” to article XI, section 7,³⁵³ which instead states, “[t]he State has an obligation to protect, control and regulate the use of Hawaii’s water resources for the benefit of its people” and requires the legislature to create a state agency and water code to regulate water resources.³⁵⁴ The delegates ultimately declined to add the term “public trust” to article XI, section 7 because some delegates were fearful that the term “public trust” meant “ownership.”³⁵⁵ Although one could argue that the framers did not intend for article XI, section 1 to be a standalone public trust provision because there was no such discussion of the doctrine with respect to article XI, section 1, this argument could fail because the duties that article XI, section 1 created align with the core public trust principles of conserving and protecting resources against “depletion, waste or

346. See *Wai’āhole I*, 9 P.3d at 443 n.29 (citing Debates in Committee of the Whole on Conservation, Control and Development of Resources, in 2 PROCEEDINGS OF THE CONSTITUTIONAL CONVENTION OF HAWAII OF 1978, 855, 857, 859, 860, 866, 876 (1980) [hereinafter Debates] (containing “notable comments” by Delegates Fukunaga, Waihee, De Soto, Hoe, Chong, Horknick, and Hanaïke).

347. Debates, *supra* note 346, at 855-81.

348. *Id.* at 857.

349. *Id.*

350. Coplan, *supra* note 170, at 324.

351. Debates, *supra* note 346, at 857.

352. *Id.* at 855-81.

353. *Id.* at 855.

354. *Id.* at 857.

355. *Id.*

destruction,” which the framers intended to and did incorporate into article XI, section 1.³⁵⁶

c. Other Constitutional Provisions

In *Wai'āhole I*, the court's ruling that “the people of this state have elevated the public trust doctrine to the level of a constitutional mandate”³⁵⁷ seemed to rely on the existence of two constitutional provisions. The court held, “article XI, section 1 and article XI, section 7 adopt the public trust doctrine as a fundamental principle of constitutional law in Hawai'i,”³⁵⁸ which supported its conclusion that “the public trust doctrine applies to all water resources without exception or distinction.”³⁵⁹ The court, however, purposefully declined to decide whether affirming public trust protection for a particular resource requires a separate constitutional provision explicitly protecting the resource, as was the case in *Wai'āhole I*. Justice Nakayama stated, “[w]e need not define the full extent of article XI, section 1's reference to ‘all public resources’ at this juncture.”³⁶⁰ Because no additional constitutional provision exclusively and explicitly protects the air or atmosphere, determining whether the atmosphere is a public trust resource in Hawai'i would require a court to further elaborate on the effect and scope of article XI, section 1.³⁶¹

Since *Wai'āhole I*, the Hawai'i Supreme Court has suggested that the public trust doctrine applies to all natural resources, regardless of whether a separate constitutional provision protecting the resource at issue exists. In

356. Compare *id.*, with Mary Christina Wood, *Atmospheric Trust Litigation Across the World*, in ADJUDICATING CLIMATE CHANGE: STATE, NATIONAL, AND INTERNATIONAL APPROACHES, 168 (William C. G. Burns & Hari M. Osofsky eds., 2009) (“The public trust doctrine has flowed through countless forms of government through the ages of humanity. At its core, the doctrine is a declaration of public property rights as originally and inherently reserved through the peoples’ social contract with their sovereign governments. Under this principle, the public holds a perpetual common property interest in crucial natural resources. Government, as trustee, must act in a fiduciary capacity to protect such natural assets for the beneficiaries of the trust, which include both present and future generations of citizens.”).

357. *Wai'āhole I*, 9 P.3d 409, 443 (Haw. 2000).

358. *Id.* at 444.

359. *Id.* at 445.

360. *Id.*

361. But see HAW. CONST. art. XI, § 9 (“Each person has the right to a clean and healthful environment, as defined by the laws relating to environmental quality, including control of pollution and conservation, protection and enhancement of natural resources.”).

Morimoto v. Board of Land & Natural Resources,³⁶² plaintiffs-appellants argued, among other things, that the State of Hawai'i Board of Land and Natural Resources violated article XI, section 1 by approving a highway project that would harm the endangered Palila, a native bird.³⁶³ Although the court ultimately found no constitutional violation based on insufficient evidence of harm, the court did not reject the argument that the Palila was a public trust resource.³⁶⁴ In a footnote, the court explained, "[i]n this jurisdiction, the Public Trust Doctrine has been adopted as a fundamental principle of constitutional law, and is derived from Article XI, section 1 of the Hawai'i Constitution."³⁶⁵ As Professor Robin Kundis Craig has noted with regard to *Morimoto*, "[t]he Hawai'i Supreme Court has indicated that these more general constitutional public trust concepts extend to environmental and biodiversity protection"³⁶⁶ Based on the footnote in *Morimoto*, the atmosphere, like wildlife, could merit public trust protection based on article XI, section 1 alone.

Alternatively, one could dismiss the court's footnote in *Morimoto* as dictum and limit the public trust doctrine's scope to more traditional applications by arguing that public trust protections apply to resources that are specifically and exclusively protected by another constitutional provision. Such was the case in *Wai'āhole I* and for other resources that Hawai'i courts have afforded public trust status thus far. For example, article XI, section 6 states, "[t]he State shall have the power to manage and control the marine, seabed and other resources located within the boundaries of the State."³⁶⁷ If a plaintiff were to bring a public trust claim regarding navigable waters or submerged lands solely under the Hawai'i Constitution, this provision could supplement article XI, section 1 to protect the resource. Because no other provision in the Hawai'i Constitution explicitly establishes a government duty to protect, control, and regulate the air or atmosphere, as article XI, section 7 does for water resources,³⁶⁸ a narrow reading of *Wai'āhole I* could inhibit acknowledgment of an atmospheric public trust under the Hawai'i Constitution.

d. Preceding Circumstances and History

Article XI, section 1's predecessor provision and the circumstances prompting the 1978 amendment provide further guidance as to whether the

362. *Morimoto v. Bd. of Land & Natural Res.*, 113 P.3d 172 (Haw. 2005).

363. *Id.* at 184.

364. *Id.*

365. *Id.* at 177 n.16.

366. Craig, *Western States*, *supra* note 210, at 88.

367. HAW. CONST. art XI, § 6.

368. *Id.* § 7.

current provision can be read as establishing a public trust in all natural resources, including the atmosphere. The predecessor provision stated:

The legislature shall promote the conservation, development and utilization of agricultural resources, and fish, mineral, forest, water, land, game and other natural resources.³⁶⁹

Recall that the new provision states:

For the benefit of present and future generations, the State and its political subdivisions shall *conserve and protect* Hawaii's natural beauty and *all natural resources*, including land, water, *air*, minerals and energy sources, and shall promote the development and utilization of these resources in a manner consistent with their conservation and in furtherance of the self-sufficiency of the State. *All public natural resources are held in trust by the State for the benefit of the people.*³⁷⁰

The delegates, thus, amended the provision in terms of scope and the state's duty. First, the previous provision explicitly protected six natural resources and "*other natural resources.*"³⁷¹ The new provision explicitly protects five types of natural resources, including "air," as well as "*all natural resources.*"³⁷² The delegates significantly broadened the scope of the natural resources provision such that it could be interpreted to apply to the atmosphere.

Second, the delegates changed the state's duties from "shall promote the conservation, development and utilization"³⁷³ to "shall conserve and protect,"³⁷⁴ and maintained "development and utilization" as conduct that the state merely must "promote."³⁷⁵ In the preceding provision, the term "promote"³⁷⁶ provided leeway for the state to favor development over conservation. According to the 1978 Constitutional Convention Studies,³⁷⁷ the predecessor provision "provid[ed] the justification for almost any

369. HAW. CONST. art. X, § 1 (prior to 1978 amendments).

370. HAW. CONST. art. XI, § 1 (emphasis added).

371. HAW. CONST. art. X, § 1 (prior to 1978 amendments) (emphasis added).

372. HAW. CONST. art. XI, § 1 (emphasis added).

373. HAW. CONST. art. X, § 1 (prior to 1978 amendments).

374. HAW. CONST. art. XI, § 1.

375. Compare HAW. CONST. art. X, § 1 (prior to 1978 amendments), with HAW. CONST. art. XI, § 1.

376. HAW. CONST. art. X, § 1 (prior to 1978 amendments).

377. HAWAII CONSTITUTIONAL CONVENTION STUDIES 1978 (Richard F. Kahle, Jr. ed., 1978).

legislative action, except for the purposeless destruction of the resource.”³⁷⁸ The delegates at the 1978 Constitutional Convention amended the provision because, at the time, “the direction to care for our natural resources seems to be overly weighted by the emphasis on development and utilization.”³⁷⁹ In addition, many environmental problems that arose in the 1970s were unforeseen in 1950, when article X, section 1 of Constitution was adopted.³⁸⁰ In the 1970s, “in the wake of a building boom and increased pressures on our natural resources, there has been a growing need for better management, and clearer policies to guide it.”³⁸¹ Article XI, section 1 more firmly established the state’s duty to “conserve and protect” resources for “present and future generations,” and to hold them “in trust”³⁸²—all of which are public trust principles that are clearly distinct from the former mandate to “promote” conservation.³⁸³ Thus article XI, section 1 not only broadened the scope of the provision, but also strengthened the state’s duties. Both changes support the concept of Hawai’i’s atmospheric public trust.

B. Breach of the Atmospheric Public Trust in Hawai’i

Professor Wood asserts that, after a court finds that the atmosphere is a public trust resource, the next step is to determine whether the government has breached its fiduciary duty.³⁸⁴ Embedded in this inquiry is the question of what the government’s duties entail. She asserts that the duty of “protection applies across the board to all [public trust] assets.”³⁸⁵ This is consistent with article XI, section 1’s mandate to “conserve and protect,”³⁸⁶ as well as the Hawai’i Supreme Court’s interpretation in *Wai’āhole I*: “Under the public trust, the state has both the authority and the duty to preserve the rights of present and future generations.”³⁸⁷ Because the duty

378. James T. Shon, *Analysis of Hawaii’s Constitutional Provisions on the Conservation and Development of Resources*, in HAWAII CONSTITUTIONAL CONVENTION STUDIES 1978, 11, 12 (Richard F. Kahle, Jr. ed., 1978).

379. Delegate Hoe, Debates Comm. Whole Proposal No. 17, in PROCEEDINGS, *supra* note 345, at 857.

380. Shon, *supra* note 378, at 14.

381. *Id.* at 12.

382. HAW. CONST. art. XI, § 1.

383. HAW. CONST. art. X, § 1 (prior to 1978 amendments).

384. Mary Christina Wood, *Advancing the Sovereign Trust of Government to Safeguard the Environment for Present and Future Generations* (Part II): *Instilling a Fiduciary Obligation in Governance*, 39 ENVTL. L. 91, 112 (2009).

385. *Id.*

386. HAW. CONST. art. XI, § 1.

387. *Wai’āhole I*, 9 P.3d 409, 453 (Haw. 2000).

to protect the atmosphere for future generations is amorphous, a presiding court would have to identify more specific obligations, as well.³⁸⁸

With respect to the water resources trust, the Hawai'i Legislature has provided more specific guidelines to advise agency decision-making by the State of Hawai'i Commission on Water Resources Management (CWRM)—the agency responsible for implementing the water resources trust.³⁸⁹ In 1987, the legislature added the duty of ensuring “reasonable beneficial use” to the state Water Code.³⁹⁰ Thus, the Hawai'i Constitution and the state Water Code create the dual mandates of (1) protection and (2) “reasonable and beneficial use.”³⁹¹ The Hawai'i Supreme Court has elaborated upon the “reasonable beneficial use” standard to guide CWRM in upholding its public trust obligations.³⁹² For example, allocating water resources through the water use permitting system requires balancing uses on a case-by-case basis.³⁹³ CWRM must weigh environmental costs and benefits against economic and social factors, among other things, and commercial uses require a heightened degree of scrutiny.³⁹⁴ The state Water Code and the Hawai'i Supreme Court have supplemented the Hawai'i Constitution's mandate to “conserve and protect”³⁹⁵ so that CWRM has a better understanding of how to uphold the trust.

The “reasonable beneficial use” standard, however, may be inappropriate for the purposes of protecting the atmospheric public trust because the Hawai'i Legislature adopted the standard—common among water resource law—specifically with water resources in mind.³⁹⁶ Professor Wood recommends contouring the atmospheric trust duty in terms of the atmospheric GHG levels necessary to “restore equilibrium.”³⁹⁷ It could be somewhat easy for a Hawai'i Court to find a breach under this standard because the Hawai'i Legislature did not consider the GHG levels necessary to restore planetary equilibrium when it adopted Act 234, Hawai'i's climate change law,³⁹⁸ or the state's renewable portfolio standards under HCEI.³⁹⁹

388. Wood, *Part II*, *supra* note 384, at 112.

389. HAW. REV. STAT. § 174C--5.

390. E.g., HAW. REV. STAT. § 174C-49(a)(2) (listing “reasonable beneficial use” as a permit conditions).

391. *Wai'āhole I*, 9 P.3d at 451.

392. *Id.* at 454.

393. *Id.*

394. *Id.*

395. HAW. CONST. art. XI, § 1.

396. *Wai'āhole I*, 9 P.3d at 454.

397. Wood, *Part II*, *supra* note 384, at 112.

398. In Act 234, the Hawai'i Legislature did not mention its reasoning behind the 1990-level GHG benchmark. 2007 Haw. Sess. Laws Act 234.

Nor have the DOH or the PUC in their respective agency procedures or decision-making.⁴⁰⁰ Thus, if a court were to adopt Professor Wood's standard for determining whether the state has breached its atmospheric trust duties, ATL plaintiffs could easily prevail.

C. Remedies in Hawai'i Atmospheric Trust Litigation: Practical Implications

According to Professor Wood, the third step in ATL is crafting a remedy.⁴⁰¹ She recommends seeking two types of remedies for ATL claims: declaratory and injunctive.⁴⁰² This section describes Professor Wood's proposals for declaratory and injunctive relief, and more importantly, discusses the practical implications of granting such relief from various stakeholders' perspectives.

1. Declaration that the Atmosphere Is a Public Trust Resource in Hawai'i

The first type of relief that ATL plaintiffs have sought is a declaration that the atmosphere is a public trust resource and that the government has a duty to protect its existence for the benefit of present and future generations.⁴⁰³ According to Professor Wood:

A declaratory judgment carries enormous importance for its potential impact beyond the courtroom, as it would be transmitted internationally through news feeds that reach thousands of climate professionals and activists in other countries. By clarifying a framework of carbon responsibility, a declaratory judgment could become a yardstick for political action worldwide and provide citizens with conceptual tools they need to hold their own governments accountable in quantifiable terms at all jurisdictional levels.⁴⁰⁴

399. In Act 155, the Hawai'i Legislature listed economic factors behind the clean energy legislation. 2009 Haw. Sess. Laws Act 155.

400. The DOH and the PUC follow the requirements of Act 234 and Act 155, respectively.

401. Wood, *Part II*, *supra* note 384, at 113-17.

402. Wood, ATL, *supra* note 1, at 1037-38.

403. E.g., Amended Complaint at 38, Alec L. v. Jackson, Case No. C11-022-3 DMR (Dist. Cal. Jul. 27, 2011).

404. Wood, ATL, *supra* note 1, at 1036.

Granting declaratory relief in a Hawai'i ATL case could support efforts to mitigate climate change in Hawai'i and elsewhere. Broadly speaking, these potential benefits are as follows: (1) clarifying the government's role and heightened duty to protect and conserve the atmosphere in Hawai'i; (2) establishing judicial precedent for future ATL claims; and (3) building support, momentum, and publicity for ATL throughout the country and the world.

The first potential benefit—clarification of the government's roles and duties—is of paramount importance in Hawai'i. Such clarification is necessary for both the legislative and executive branches. Both Hawai'i's climate change law and its clean energy law are purely legislative constructions.⁴⁰⁵ Without acknowledgment that the atmosphere is a public trust resource under the Hawai'i Constitution, the legislature may repeal or weaken these statutes.⁴⁰⁶ If a Hawai'i Court, however, were to establish an atmospheric public trust, the legislature could be less inclined to do so.

Hawai'i's atmospheric public trust also could clarify the roles and duties of administrative agencies. According to Professor Gregory Munro, "[n]ormally, political leaders, in the exercise of their offices, have wide latitude to balance interests and mediate disputes between competing interests. However, they are much more restricted when they wear the hat of a trustee over a public resource."⁴⁰⁷ The Hawai'i Supreme Court's characterization of CWRM's role in *Wai'āhole I* gives credence to Professor Munro's observation; the court instructed that CWRM "must not relegate itself to the role of a mere 'umpire passively calling balls and strikes for adversaries appearing before it,' but instead must take the initiative in considering, protecting, and advancing public rights in the resource at every stage of the planning and decisionmaking process."⁴⁰⁸ Thus, if the Hawai'i Supreme Court held the DOH and the PUC—the implementing agencies for Hawai'i's climate change and clean energy laws—to the same standard as CWRM, the atmospheric public trust would create an overarching duty for the DOH and PUC to uphold in its planning and decisionmaking. For example, the PUC must evaluate the RPS every five years, starting in 2013, "and may revise the standards based on the best information available at the time to determine if the standards remain effective and achievable."⁴⁰⁹

405. Telephone interview with Richard Wallsgrove, Program Director, Blue Planet Foundation (Apr. 15, 2013).

406. *Id.*

407. Gregory S. Munro, *The Public Trust Doctrine and the Montana Constitution as a Legal Bases for Climate Change Litigation in Montana*, 73 MONT. L. REV. 123, 136 (2012) (footnotes omitted).

408. *Wai'āhole I*, 9 P.3d 409, 455 (Haw. 2000).

409. 2009 Haw. Sess. Laws Act 155 § 4.

Absent a public trust duty to reduce GHG levels to amounts necessary to restore and maintain a livable planet, the PUC could be inclined to recommend that the legislature weaken the RPS standards.⁴¹⁰ With respect to the DOH, the draft GHG rules give the DOH discretion in enforcing the required emissions reductions.⁴¹¹ An atmospheric public trust would create an overarching duty to uphold the trust in an agency's exercise of discretion. In essence, declaratory relief could help to assure that Hawai'i decision-makers stay on course in implementing Hawai'i's climate and energy laws.

The second potential benefit of declaratory relief—judicial precedent—means that courts and plaintiffs could turn to a substantive declaration confirming the atmospheric public trust to guide future cases. The public trust is of primary importance in water cases and will continue to serve as a mechanism for resources protection well into the future. In large part because of CWRM's public trust duties, the Hawai'i Supreme Court has remanded CWRM's water allocations in every lawsuit since the Hawai'i Legislature passed the Water Code.⁴¹² Declaratory relief stating that the atmosphere is a public trust resource also could provide a basis for claims against non-government "trustees" of the atmosphere, a concept that Professor Wood has begun to explore.⁴¹³

Third, a declaratory judgment could build support, momentum, and publicity for ATL claims throughout the country and the world. Courts in other jurisdictions often cite *Wai'āhole I* in public trust cases,⁴¹⁴ and scholars in their publications.⁴¹⁵ Professor Wood said that if a Hawai'i court granted declaratory relief to an ATL plaintiff, "word would spread around in the world

410. Telephone interview with Richard Wallsgrove, Program Director, Blue Planet Foundation (Apr. 15, 2013).

411. HAW. CODE R. § 11-60.1 (proposed Feb. 1, 2012).

412. Teresa Dawson, *Supreme Court Order Water Commission To Revisit Decision on West Maui Streams*, ENV'T. HAW. 1 (Sept. 2012).

413. Wood, ATL, *supra* note 1, at 1036; Wood, Part II, *supra* note 384, at 112.

414. A Shephard's search for *Wai'āhole I* revealed the following cases from other jurisdictions: *Mallinckrodt LLC v. Littell*, 616 F.Supp.2d 128, 149 (D. Me. May 20, 2009) (No. CV-08-420-B-W); *South West Sand & Gravel, Inc. v. Central Arizona Water Conservation Dist.*, 212 P.3d 1, 5, 221 Ariz. 309, 313, 543 Ariz. Adv. Rep. 15, 15 (Ariz. App. Div. 1 Nov 10, 2008) (NO. 1 CA-CV 07-0435); *In re Title, Ballot Title, Submission Clause for 2011-2012 No. 3*, 274 P.3d 562, 573, 2012 CO 25, 25 (Colo. Apr 16, 2012) (NO. 12SA8) (in dissent); *Mineral County v. State, Dept. of Conservation and Natural Resources*, 20 P.3d 800, 808, 117 Nev. 235, 247 (Nev. Apr 11, 2001) (NO. 36352); *Loudoun Hosp. Center v. Stroube*, 650 S.E.2d 879, 891, 50 Va.App. 478, 502 (Va.App. Oct 09, 2007) (NO. 1273-06-4).

415. E.g., Craig, *Western States*, *supra* note 210, at 86-88.

in an hour” and embolden judges presiding over similar suits.⁴¹⁶ It would inspire hope in youth plaintiffs and climate change activists throughout the world that governments have a duty that supersedes politics and government inertia. Declaratory relief, however, cannot force action in and of itself.

2. Injunction Requiring More Aggressive Greenhouse Gas Emissions Reductions

Professor Wood recommends seeking injunctive relief to require more aggressive GHG emissions reductions. In the Hawai’i ATL petition for rulemaking, Joshua requested that the DOH:

(2) Adopt a carbon dioxide emissions reduction plan that, consistent with the best available science as described in the attached report, reduces state-wide fossil fuel carbon dioxide emissions by at least 6% annually until at least 2050, and expands Hawaii’s capacity for carbon sequestration; [and]

....

(4) Adopt any necessary policies or regulations to implement the greenhouse gas emissions reduction plan, as detailed in sections (1) and (2) above.⁴¹⁷

Professor Wood asserts that the courts might be compelled to grant this type of relief:

[S]ociety and law would be paralyzed if it could not draw lines or set quantitative goals, despite the inherent random nature of the details of such an exercise. The well-established precautionary approach gives a basis for scientists to designate reasonable mileposts and to err on the side of caution. It is predictable that there will be scientific disputes over carbon reduction targets, but courts, as in other areas of law, have the fact-finding ability to judge scientific adequacy and adopt a cautionary course of action.⁴¹⁸

416. Telephone Interview with Mary Christina Wood, Philip H. Knight Professor of Law, Oregon Law (Mar. 14, 2013).

417. Scott ATL Petition, *supra* note 2, at 3.

418. Wood, ATL, *supra* note 1, at 1028.

But, Professor Sax has asserted,

It is virtually unheard of for a court to rule directly that a policy is illegal because it is unwise; the courts are both too sophisticated and too restrained to adopt such a procedure. Rather, they may effectively overrule a questionable policy decision by requiring that the appropriate agency provide further justification; alternatively, the courts may, in effect, remand the matter for additional consideration in the political sphere, thus manipulating the political burdens either to aid underrepresented and politically weak interests or to give final authority over the matter to a more adequately representative body.⁴¹⁹

Aside from possibly running afoul to the political question and separation of powers doctrines, as occurred in the Alaska⁴²⁰ and Oregon⁴²¹ ATL cases, it is unlikely that a Hawai'i court would grant the type of injunction that ATL plaintiffs would seek. As illustrated in *Wai'āhole I*, the court will not "supplant its judgment for that of the legislature or agency. However, . . . this court will take a 'close look' at the action to determine if it complies with the public trust doctrine and it will not act merely as a rubber stamp for agency or legislative action."⁴²² In the case of the water resources trust, the Hawai'i Supreme Court "focuses on process—less on 'what' the state does, than 'how' it does it."⁴²³ Thus, a Hawai'i court likely would not require the specific GHG emissions reductions that ATL plaintiffs seek, but instead might require the legislature or agency to revisit its policies and regulations and ensure that they comply with protecting the atmospheric public trust based on best-available scientific proscriptions.

The practical implications of a court stepping in to specifically require GHG emissions are numerous and involve complicated issues related to energy regulation. One can glean how stakeholders might respond to an injunction from written comments and oral testimony submitted on the DOH's draft GHG emissions rules.⁴²⁴ Generally categorized, perspectives against such requirements likely would relate to: (1) feasibility, (2) fairness, and (3) economic burden. First, as to feasibility, it would be difficult to

419. Sax, *supra* note 167, at 558.

420. Kanuk v. Alaska, Case No. 3AN-11-07474CI (Sup. Ct. Alaska Mar. 19, 2012).

421. Chernaik v. Kitzhaber, Case No. 16-11-09273 (C.C.O. Apr. 5, 2012).

422. *Wai'āhole I*, 9 P.3d 409, 456 (Haw. 2000).

423. Sproat & Moriwake, *supra* note 269, at 268.

424. The author submitted an information request to the DOH and received electronic copies of the submitted testimony.

impose GHG emissions reductions across the board in Hawai'i because federal law generally preempts regulation of mobile source emissions (i.e. those from aviation, marine, and ground transportation)⁴²⁵—which together constitute 50% of Hawai'i's GHG emissions from energy sources.⁴²⁶ How could Hawai'i attain the requisite emissions reductions if these major sources were not included? Second, with respect to fairness, because federal law likely preempts regulation of the above sources, a court's requirement could place an unfair burden on stationary sources (i.e., power plants) to assume sole responsibility for emissions reductions, putting certain sectors at a complete disadvantage.⁴²⁷ Third, with respect to economic burden, Hawai'i residents ultimately pay the costs of stationary source upgrades through PUC's cost recovery program.⁴²⁸ Hawai'i already has the highest electricity rate in the nation—more than three times the national average.⁴²⁹ These price increases would spill over to individuals, farmers, and small businesses.⁴³⁰ Rather than imposing specific substantive requirements that would burden administrative agencies with a multitude of technical issues, a Hawai'i court likely would instead create general duties and standards to guide agency decision-making.

V. Conclusion

The Hawai'i public trust doctrine's progressive and evolutionary nature may likely support a conclusion that the atmosphere is a public trust resource in Hawai'i. But what the atmospheric trust duties specifically would require remains unclear. Declaring an atmospheric public trust in Hawai'i could provide the resource with a stronger, more permanent degree of protection than the Hawai'i Legislature and state agencies have afforded it, and could prevent the governmental branches from reneging on their atmospheric trust commitments and responsibilities in the future. A Hawai'i court, however, likely would not replace its judgment for that of the

425. Telephone Interview with Steven J. Oppenheimer, former attorney for the Hawaiian Electric Company (Apr. 17, 2013).

426. ICF INTERNATIONAL, HAWAII GREENHOUSE GAS INVENTORY: 1990 AND 2007 4 Table 2 (2008).

427. Written Testimony of Ronald R. Cox, Vice President, Hawaiian Electric Co. (Jan. 11, 2013).

428. Oral Testimony of Makena Coffman, Associate Professor, Univ. of Haw. Dep't of Urb. & Regional Planning, in Honolulu, Haw. (Nov. 28, 2012).

429. *Hawaii – Rankings* U.S. ENERGY INFORMATION ADMINISTRATION, <http://www.eia.gov/electricity/monthly> (last visited Mar. 4, 2013).

430. Written Testimony of Dean Okimoto, President, Hawaii Farm Bureau Fed'n, Jan. 14, 2013; Oral Testimony of Makena Coffman, Associate Professor, Univ. of Haw. Dep't of Urb. & Regional Planning, in Honolulu, Haw. (Nov. 28, 2012).

legislature or the state agencies by mandating specific GHG emissions reductions because to do so would thrust the court into the complicated and ever-evolving field of energy planning and law. Instead, a court could establish guidelines outlining procedural duties for upholding the trust. Such guidelines should require scientifically rooted decision-making based on the GHG levels necessary to restore planetary balance. By acknowledging the state's overarching duty to preserve and protect the atmosphere, the courts can help to ensure that Hawai'i, and the world, remains livable for kids like Joshua, and generations to come.